MENTAL HYGIENE

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EDITORIAL

PSYCHIATRISTS, neurologists, psychologists and nurses in all parts of the country have laid aside for the time their civil duties and have taken their places in the military forces of the government. A big task confronts them. In no previous war have mental and nervous diseases risen to such proportions. Upon the specialists who enter the military service will rest the responsibility of stemming the tide by eliminating from the armies those who are obviously unfit for military service because of neuropathic or psychopathic conditions and of restoring and conserving for future civil usefulness those who, in spite of preliminary precaution, enter the army and prove unable to withstand the rigors of service.

The problems that will face the students of nervous and mental disease in the army will be many and intricate. The clinical problems will not be new except in their military setting and in their magnitude; but these factors will give rise to many complexities. It is important, therefore, that there be available for these students the latest information in regard to nervous and mental disorders in war. The present number of MENTAL HYGIENE has been planned to meet this need. On this account the material in this number must of necessity be somewhat more technical than the editors have planned to present in this magazine. If the information regarding the mental problems of war which has been gathered and is here presented will help those who are to carry the resources of psychiatry, neurology, psychology and mental nursing into the army and navy, we feel that such a departure in policy is amply justified.

MOBILIZING THE BRAINS OF THE NATION

STEWART PATON, M.D.
Member of National Research Council

WE are face to face with a great crisis, not national but world wide. Forces are at work which are stirring our civilization to its foundation. We can not predict to what extent we shall be successful in meeting portentous issues. One thing, however, is certain in view of the great revolution taking place against autocracy, and that is that every effort must be made to mobilize the brain power of this nation so we may be brutally efficient in war now with the object of becoming humanely efficient in peace.

Sentiment if not carefully guarded by intelligence will result in defeat in battle, and will prevent us from repairing the damage done to our civilization. We should also be prepared to observe every precaution necessary to prevent human energy from being dissipated; and should resist the temptation to conceal under such euphemistic terms as "charity" or "correction" the evidences of our neglect to organize for a constructive campaign of preparedness for living. Both these words cover a multitude of sins of omission, and in spite of the shock the realization of an unpleasant truth may cause us, it becomes evident, upon reflection, that their presence in our vocabularies is equivalent to an apology for not having squarely faced the great problems connected with living. Instead of waiting until we can be "charitably" and "correctionally" disposed towards the evils which have befallen us, let us frankly confess that if greater intelligence had been exercised, many disasters would not have occurred.

The proposed plans for the mobilization of our national resources is excellent as far as it goes. The co-ordination of commercial, industrial and military resources has become immediately necessary. Practically little has been done so far to co-ordinate and increase our information of the methods available for the control of the brains which are to direct this enormous undertaking. Twelve years ago I took occasion to suggest that if, as Lockyer said, "A struggle has begun in which science and brains are to take the place of sword and sinew," it would seem that "some concerted and well directed effort be made to find out the most efficacious way of increasing the brain power of the nation."

Unfortunately, the sword has been drawn again and the brains of human beings are being subjected to the greatest strain ever placed upon them and yet little attention has been devoted to protecting the functions of these organs.

It is unnecessary to recall the high rate of incidence of nervous and mental disease occurring in this country before the present disaster visited us. Think of the State of New York devoting to the care of the insane one-third of the sum allotted to cover its expenses, and then not being able to make adequate provisions for those afflicted with these disorders. Add to this list the number of those suffering from functional nervous disorders, as well as the army of unfortunates who are so decidedly anti-social in their behavior that their activities have to be carefully supervised and restricted, and the figures become appalling. What a comment it is upon our intelligence that we have to wait for the kind of evidence which carries an unwelcome sense of conviction in much the same way as an *argumentum ad hominem* does in order to appreciate the necessity for making adequate provision to study these shocking and preventable conditions.

If the predicament we should have faced squarely before the war began was of such a serious nature, what can we say about the changes that have taken place since August, 1914? Consider, for example, the rapid rise of nervous and mental disorders among the soldiers. Among the Canadians these diseases now represent over ten per cent of the total casualties. These figures, however, give us only a faint conception of the task imposed upon us, first to win this war and then to assist in restoring conditions favorable for sane thought and action. Do we need any more evidence to show how necessary it is to study the human machine and to be well informed in regard to the laws governing its activities? If this knowledge was urgently needed in times of peace, is it not imperatively demanded as soon as the added stress under which it is now working is recognized? Emotions are keyed up to a new high pitch. Extraordinary demands are made upon human ingenuity, upon the capacity to repress the feeling of individuality and to substitute for it the desire of social co-operation, to form the habit of thinking quickly and to the point, and to act with promptitude and fortitude. To change one's own habits of thought and action is no small task, but to change those of a nation is a prodigious undertaking, the ultimate consequences of which can not be foretold.

We cannot, without sacrificing conditions essential for the preservation of personal and national sanity, hide the fact that many of the attempts made to face the actual issues of life are at the best half-hearted efforts; while the recognition of critical situations or events is interfered with by the tendency to compensate for defects in perception by introducing a vague mysticism. While in this perplexed state of mind, unsatisfied secret longings drive their possessors to take refuge in the imaginary world created by wishful thinking. Let us begin by facing the world, not as we imagine it to be in our dreams nor hope it may become, but as it is today. As soon as our eyes are opened wide enough to see the realities of everyday life, we are struck instantly by the prevailing ignorance of the biologic laws regulating the personality. Only after a disaster threatens shipwreck—personal, national or racial—do we seek for the knowledge which, if properly utilized, can save us.

It is high time for us to realize that success in the great struggle upon which we have entered, depends not alone upon guns, but most of all upon the brains of the men behind the guns. If this principle is true for the organization of society for the successful prosecution of war, a still more complex organization is required to win the victories of peace. If we are genuine friends of peace, it is incumbent upon us to prepare for a more efficient and intelligent organization of social forces than is demanded for the successful prosecution of the war.

Momentous issues are at stake, and the solution of the difficulties depends upon the answer given to one question: can human energies be directed intelligently? This is no time for quack remedies, or for temporizing with opportunistic measures. We need to go to the root of the trouble and get accurate information as to the structure and function of the machine we are trying to operate. How do we expect to control temperament and character if we are ignorant or indifferent in regard to the nature of the biological mechanisms regulating temperament and character? In order to accomplish our purpose, it is obvious we should begin, not end, by studying living human beings, by training ourselves to become capable of observing their behavior, by recording the manner in which they respond to changes in environment, by discovering the laws regulating feeling, thinking and acting, and then try to ascertain to what extent failure and success in living are the results of ancestral or inherited qualities. When this in-

formation has been gathered or collected, we may apply the principles to the practical regulation of conduct. To adopt any other method of procedure has already proved to be detrimental rather than progressive.

It requires both courage and intelligence to face the fact that comparatively little is known of the laws governing human behavior, but when once the admission is made, then it is our first duty to accept the privilege of working hard to add as rapidly as possible to the present stock of information. We have tried to navigate the sea of life without chart and without compass. The priest has told us what men ought to become, the poet has recorded his dreams of an idealized race, while the historian has given us interesting pictures of what human beings were supposed to have been; but man as he actually is, has only recently become the subject for study. The present catastrophe which threatens civilization is one of the tragic results of attempting to organize society in order to satisfy theoretical conceptions without taking cognizance of the fundamental laws that govern human nature. If we had been familiar with the biologic mechanisms controlling the personality, we might have been alive to the danger lurking in any conception of duty which carries with it the idea of "special dispensations of providence," or missions to perform for which others are unfitted. Perhaps we might have had the satisfaction of knowing that rational methods had at least been suggested to abate the rancorous and contemptuous hatred associated with the growth of the Pharisee's idea about the value of his own possessions. We have learned through the bitter experience of the past few years that manic boastfulness, blind assumption of intellectual superiority may develop rapidly out of such apparently harmless foibles of character as occur when a nation is disinclined to recognize the importance of trying to see itself as others see it. If we had been familiar with the dangerous tendencies associated with the emotional reactions responsible for an exaggerated egotism, we should have been quick to recognize the accumulation of high explosives in the German character. When the spark was struck, the presence of powder was as much of a surprise to those who kindled the flame as it was to the stupefied onlookers.

There are other traits of temperament and character which occasion surprise as soon as we try to trace their genesis. The articles of faith of pacifist and Prussian militarist, for example,

seem upon casual investigation to represent opposite poles, but as a matter of fact the underlying emotional trends and superficial intellectual currents in both cases have their sources in practically the same dangerous egotism. The alienist appreciates how quickly the radical mystic may be quickly transformed into extreme materialist, or the process may be reversed. When the full truth about the personality is known, it is often much stranger than fiction. The "conscientious objector" under slightly different conditions may become the fanatical persecutor. Many of the persons who in a great crisis like the present one promulgate the doctrines of non-resistance are preparing a series of half-repressed emotional reactions which later may not only reduce the level of their intellectual activity but may make it exceedingly difficult for them to maintain the rational control of their own behavior—a difficulty Hamlet appreciated. If we tried to regulate life by the principles laid down in "Why Men Fight" (Bertrand Russell, Century Co., 1917), we should be forever crying peace without attaining it. The professional pacifist and the Prussian militarist are about equally resentful when facing the loss of personal prestige, and in these reactions and not in their expressed opinions do we find the correct measure of the forces giving shape to their personalities. The advocate of the doctrine of non-resistance, and the champion of the settlement of all claims by force are both seeking for the freedom from the feeling of personal restraint which is expressed often in an apparently impersonal phrasing as "complete independence of class and party and creed."

The focussing of forces apparently innocuous but involving a mystical conception of both culture and duty resulted in the formation of the dangerous obsession by a nation which was the aggressor under conditions of great emotional stress becoming convinced that it had been attacked.

The final and satisfactory explanation of the present war will come not from the diplomatist or historian, but from the investigator who is engaged in trying to determine the forces regulating and preserving the balance of the human personality. Civilized nations have contributed generously in the past to facilitate the exploration of unknown lands and to find the sources of great rivers. The time has come to assist investigators in locating the sources of the streams of human energy in order that their volume may be estimated and their currents charted. We have lived on

the banks of these great rivers, idly dreaming about the possibilities of their origin and the strength of their currents, but have made no provision for protection against floods which have overflowed the banks until we were forced by disaster to repair the damages and get rid of the signs of devastation. Is this not the time to quit ourselves like men and desist from referring to our delayed and spasmodic efforts to make reparation for the damage resulting from our lack of foresight as acts of charity?

Let us see now if it is not possible to get a glimpse of the chief problems relating to human life from an angle which will facilitate their formulation, and at the same time enable us to see the close dependence of the various factors concerned. Life has long been recognized as a process of adjustment. The range of successful adjustments varies in human beings all the way from the plane which is on the level with the activities of the lower animals to the mark reached by the man of genius. The degree of successful adjustment attained depends upon a number of different factors; first, upon the conditions existing within the human machine and then upon those without, collectively described as environmental. At this point we shall not further complicate the statement of the problem by trying to distinguish between the part played by environment or heredity in supplying the forces to run the machine.

In the study of the mechanisms of adjustment, we may take advantage of the analyses of temperament and character made for us by disease. Various accidents may happen to impair the adjusting capacities of the machine, physical disorders may reduce the functional efficiency of one or more organs, with the result that the entire machinery is thrown out of gear. Complex conditions which we do not understand may arise interfering seriously with the capacity for successful adaptation. When these difficulties become apparent in maladjustments taking place in the higher levels of the conscious life, we are accustomed to refer to the condition as a mental disorder, while those occurring at lower levels are said to be signs of physical disease. The artificial distinctions supposed to separate the different levels have been created by man's ingenuity. One important practical test giving an accurate gage of the success attained in adjustment at the higher planes, is the willingness to face critical situations in life fairly and squarely. An inclination or a decision to dodge an important issue is evidence of failing adjustment. The conditions we call

nervous and mental diseases are symptoms of a person's unpreparedness to face the critical situations arising in the environment where he or she has been forced to live. What to the uninformed person seems to be a chaotic condition expressed in delirium, or in a long chain of insane ideas, is a marvelously well ordered attempt upon nature's part to readjust the personality while under fire and to make some sort of compensation for an unwillingness to face a crisis.

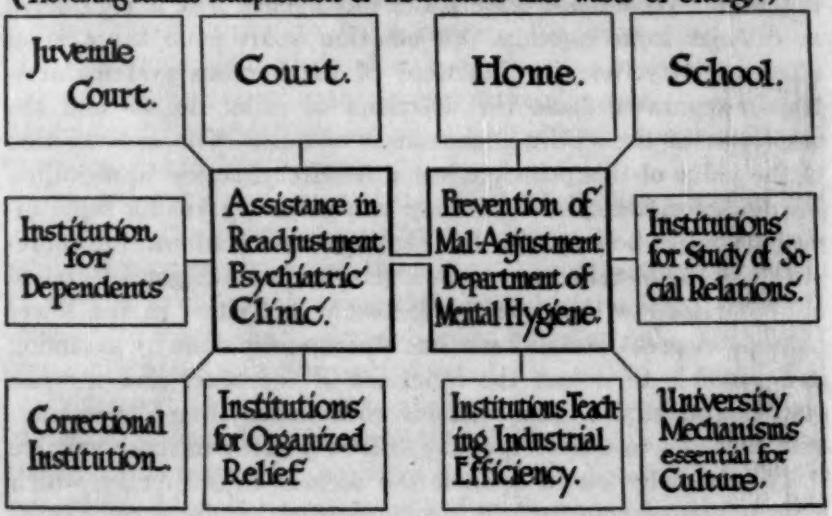
The recognition of even these few biologic principles will, I think, be of great service to us when we begin to formulate ideas for mobilizing the brains of the nation. In developing the plan we should avoid committing the same mistake which has retarded progress in the past and consists in seeing only part of the problem. Man unfortunately formed the habit of trying to study himself piecemeal and failed to take account of the behavior of the machine as an active living organism. Now we realize it is necessary to develop a technic for the study of human character. Man has been so absorbed in trying to discuss life in abstract terms that he actually forgot to inform himself even as to the principal events taking place in the life of any one person in the effort to adjust successfully to meet the daily needs. This peculiar mental attitude has been particularly unfavorable for the development of our knowledge relating to human behavior. Instead of dealing with concrete situations as they arose in life, we have vainly attempted to draw inferences from the hypothetical conduct of imaginary beings that would be of service in settling the problems created by our existence. This point of view has also been responsible for the dissipation of a great deal of energy in formulating plans for social organization. The question of human behavior was not seen in perspective and, therefore, no opportunity was given to the investigators in different fields to appreciate that they were studying only the special phases of one great problem. We are only just beginning to recognize that the knowledge useful to parents in training their children, to the social worker, judge, student of criminology, educator or alienist, as well as other persons engaged in trying to assist people to secure better adjustments and thereby increasing the success and happiness of living, is part of a common store based upon the recognition of the laws governing human activities.

We should aim to look at all the problems connected with living from a broad, biologic point of view, and refuse to accept the

artificial distinctions often made to facilitate the investigation of certain problems as in any way representing specific differences in function. We cannot understand intelligence if it is considered as distinct from emotion, nor emotion apart from the simpler reflex activity, nor the functions of the nervous systems arbitrarily separated from the activities of other organs and the responses of the entire organism as a unit. The appreciation of the value of this principle has a definite, practical application. We find, for example, that there is a tendency among some investigators to believe that the higher forms of adaptation represented in the so-called conscious levels can be intelligently studied or understood without reference to the activities in the lower planes. A great deal of harm has already been done by assuming it is possible to isolate the functions of the brain and nervous system and study them without considering their dependence and relations to other organs. This is a great mistake and we should carefully guard against the serious consequences which may be precipitated by failing to recognize the mistaken conception. No one can interpret human behavior correctly who is not familiar with the various parts of the machine. One must know something about the manner in which they are related to be competent to analyze the nature of the reciprocal activities when expressed in thought, word or action.

In view of what has been said, the question may be asked, how may we proceed to organize existing social forces with a view to intelligent action that will safeguard society against the needless reduplication of institutions and the wasteful expenditure of human energy. In the accompanying chart an indication has been given of what may be accomplished in the way of giving practical expression to the ideas already mentioned. As social organization is concerned with the intelligent direction of human behavior, let us begin by making human behavior the chief object of inquiry, and then see whether when starting out from this center it is not possible to co-ordinate a great many existing institutions which often seem to be unrelated. At present we are in a better position to assist a person to readjust life when behavior is disordered as the result of disease, than we are to prevent the occurrence of maladaptations. In every city the courts, juvenile courts, institutions for dependents, correctional institutions and institutions for organized relief, group themselves very naturally about the only center in which the methods are taught

GENERAL PLAN OF ORGANIZATION TO FACILITATE THE STUDY OF HUMAN BEHAVIOR.
(Preventing needless reduplication of institutions and waste of energy.)



for the study of human behavior—namely, psychiatric clinics. It will be a fortunate occurrence for civilization when those who are engaged in these institutions in the study of different phases of human behavior recognize more keenly than they do at present the common bond of union and the common purpose which should unite them in carrying on their work through this center. History once again is repeating itself and we pass from the study of disordered conduct to the so-called normal activities. The human interest is at first stimulated by the tragic incidences of life, disease, insanity, poverty and crime; and then there comes later the desire to prevent these unfortunate conditions. Preventive medicine has already accomplished a great deal in safeguarding us from the ravages of disease, but, unfortunately, no well planned and co-ordinated effort has been made to prevent the maladjustments in the higher levels of activity, marked by disordered feeling, uncoordinated thinking and irrational conduct. The next important step in the right direction will probably be marked by the establishment of a university department of mental hygiene closely associated with the work carried on in the psychiatric clinic. As a matter of fact, these two departments, the psychiatric clinic and the department of mental hygiene, are not actually separate institutions although recognized as such merely in order to facilitate organization. The

establishment of an institution of this character would indicate the existence of an appreciative regard for the scientific study of human behavior and would be a rational step in the impending re-organization of society. Incidentally a Department of Mental Hygiene would be a tribute to the memory of the remarkable Frenchman, Pinel, who in 1798 declared that "Medicine should form the basis for all public instruction." He was not satisfied with charitable endeavors made with the purpose of alleviating the misery and suffering of human beings when he saw it was possible to prevent disaster by training persons to be competent to guide the machine before its mechanisms had been hopelessly impaired by the injudicious handling of ignorant amateurs and thus prevent disaster. When once this action has been taken, we should be in a position to offer opportunities for giving instruction to teachers in the art of studying the human personality, and to convey to them some idea of the biologic methods available in acquiring information as to the dispositional trends of both temperament and character, and to call attention to the special knowledge and skill required in directing these to the best advantage. Some day we shall awaken to the importance of the tragic results connected with placing persons ignorant of the laws governing human behavior in control of our educational system. Scholastic conceptions of education are now exacting a tax from our civilization represented by a degree of misery and inefficiency, and a wastage of human energy that is far greater than any one imposed by war. My experience in the examination of students in schools and universities has convinced me of the feasibility of training teachers to recognize the signs of imperfect adjustments, particularly those of the emotional life, which if not corrected, lead quickly to loss of intellectual interests, the anæsthetic effects of chronic failure, the unwillingness as well as unpreparedness to fill any critical situation, the substitution of impulses for voluntary activities, and the subsequent disappointments leading to a series of acts which later may become the cause for admission to the court, prison, sanatorium or hospital for the insane.

In a brief compass, it is not possible to enumerate even the more important results which would follow the recognition of the principle requiring those who assume the control of any form of human activities to be familiar with the machine, its functions and the relation of its parts. Culture would be interpreted in a

new and broader sense. Much more attention would be given to the study of the methods of preparing the mind to be capable of knowing what "the best that has been thought and said" is. A cultured man would be recognized as a person who was familiar with the means of keeping the mind free from overvalued ideas, from definite obsessions, from the dangerous and explosive reactions associated with an exaggerated egotism and who was emotionally prepared both to cultivate intelligent sympathies and to resist the insidious influences of wishful thinking. The scholar who grasped these principles would quickly recognize the impossibility of cultivating a well balanced mind if the fear of the practical was tolerated or the desire to gratify a monastic sense of seclusion and aloofness was encouraged. Culture thrives best when established upon a consciousness of success in facing the world and rapidly degenerates when linked with a sense of inadequacy calling for a partial withdrawal from the real world to a world created by autistic thinking. In a republic, we need to be continually on our guard lest scholarship make the mistake of assuming that the forced detachment resulting from failure to meet the actual conditions of every day life is a sign of intellectual superiority.

Eventually, as the result of insisting upon the value of biologic methods in the analysis of all forms of social, national or racial activities, we should be less inclined to promise permanent peace until something more is known of the actual conditions regulating the genesis of motives and impulses or limiting the sphere of voluntary control of actions. We should, however, become accustomed to considering the study of behavior of far more value for the promotion of peace than the interpretations of an exacting legalism. Peace congresses would encourage the accumulation of information in regard to human beings necessary for the rational control of conduct, and a rational peace propaganda would take the place of much of the maudlin sentimentality which now demonstrates the incompetency of neurotic persons to discuss international affairs intelligently as they show such a startling degree of inability to solve their own personal problems, and are anxious to symbolize this sense of inadequacy in dreams of universal peace.

It is an opportune moment for democracy to demonstrate that the successful control of human energies can be entrusted safely only to those persons who understand the mechanisms by which life is adjusted.

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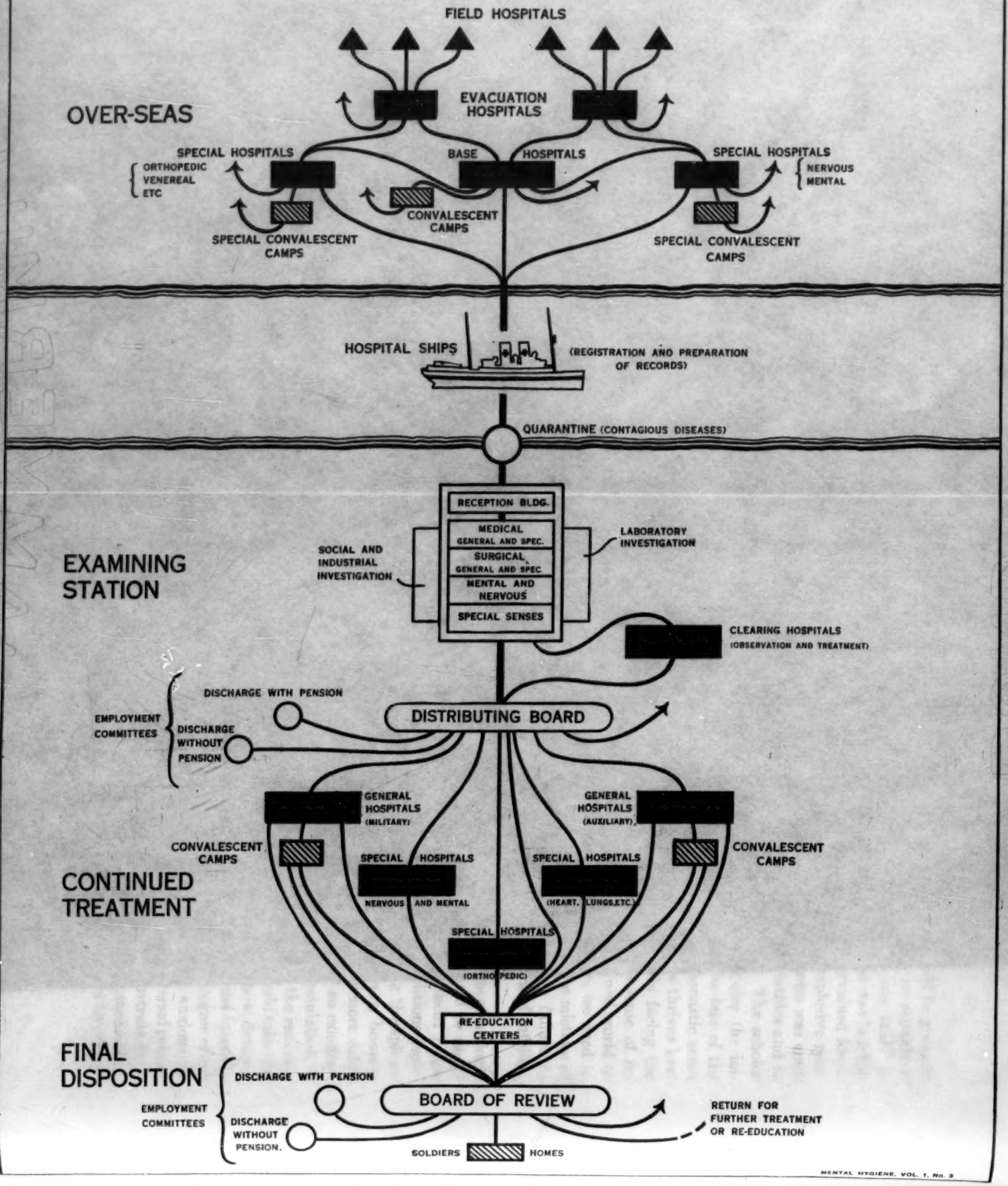
CAREER OF DISABLED RETURNED SOLDIERS

(SPEARHEADS INDICATE RETURN TO THE COLORS)



THE CARE OF DISABLED RETURNED SOLDIERS

PEARCE BAILEY, M.D.

Chairman, The Mental Hygiene War Work Committee of the National Committee for Mental Hygiene

THIS country faces a military experience similar in certain respects to that which Canada has been passing through since the outbreak of the war. Canada has increased by 100 times its original permanent army and has sent three-quarters of it on the long overseas journey. The United States, like Canada, is suddenly called upon to assemble for foreign service, an army so large that its regular army is little more than a nucleus. The expeditionary forces of both countries must operate far from their home bases, but in these respects the United States is in a less favorable position than Canada, as by virtue of blood and government relationship all outbound Canadian troops disembark first in England and, returning home, find in England a refuge.

In the spring of 1915 ships began to arrive at Halifax and Quebec with soldiers invalided home, some with wounds but more with medical disabilities such as mental disease, tuberculosis, rheumatism, etc. Our troops must be returned even more promptly, for our Allies are in no position either to care for them or to feed them. In fact, the speed with which we evacuate and return home our invalids promises to be a certain measure of this country's real service in Europe. We must be prepared shortly after our troops have reached France to receive returned invalids as fast as ships can be found to transport them. What shall we do with them? It is important to note what Canada has done and is doing in a similar emergency.

During the summer of 1915 the Canadian government created the Military Hospitals Commission for the purpose of giving assistance to the army in caring for its returned soldiers who had begun to come home in great numbers. It undertook to do what the army was then in no position to do. It provided by voluntary subscription, loan, purchase and construction, hospitals and convalescent homes for disabled Canadian soldiers invalided home. It has now, either under construction or in actual operation, fifty-nine separate institutions.

A Canadian soldier, invalided home from overseas, who still needs treatment of some kind, is examined at the receiving depot

at Quebec by a board of medical officers. This board has before it the medical records forwarded from England and recommends that the man be discharged or that further treatment be given him according to his condition. In the event of the soldier being found insane on arrival, he is sent to a special institution or to one of the provincial hospitals for the insane. Discharge without pension is given when the disability from which the man is suffering is not a result of service or has not been aggravated by service. If discharged, the soldier is given his arrears of pay to date, fifteen days' pay and allowances in advance, a suit of civilian's clothing, and free transportation to his home or elected destination, with full meals en route. He is also given a card of introduction to the secretary of the Provincial Employment Commission. If the Board of Medical Officers considers that a man's disability is such that he is entitled to a pension, his discharge is post-dated thirty days, and pay and allowance to the date of discharge are given to him. He receives also civilian's clothes. Those requiring further medical and surgical treatment—about two-thirds—are handed over to the Military Hospitals Commission and are sent to one of the institutions of the commission, the choice of institution being determined partly by the nature of the disability from which they are suffering, and partly by their place of residence. These men remain soldiers, subject to military discipline.

The medical service of the commission includes specialists in the various branches of medicine, and provides means of treatment by massage, electricity, hydrotherapy, vocational training and physical drill.

In order to provide for the discipline and pay of the men in the various hospitals and convalescent homes operated by the commission, the Military Hospitals Command was created as a part of the Canadian Expeditionary Force for home service. This command is under the direct jurisdiction of the commission. It is a link between the commission and the Department of Militia and Defense. Under its auspices special physical drills, which have been found of much value in the hospitals in England, have been introduced, with most beneficial results.

A very important part of the work undertaken by the commission is that which deals with vocational training during the period in which the men are undergoing treatment. The government has also arranged, through the Military Hospitals Commis-

sion, to carry out a system of re-education after discharge. The commission has appointed vocational officers for different provinces in conjunction with the Provincial Employment Commissions, which represent the provincial governments. Disabled Soldiers' Training Boards and Provincial Advisory Committees on Training have also been appointed. A Disabled Soldiers' Training Board consists of a member of the provincial commission, a vocational officer, and a medical man.

A soldier who has not been discharged and who is under treatment in one of the institutions operated by the commission, is entitled to the same pay and allowance as at the front.

Pensions are determined by the applicant's disability, without reference to former occupation. No deduction is made because of the pensioner having undertaken work, or because of his perfecting himself in some form of industry. This ruling has been found necessary in Europe as well as in Canada, as the invalided soldier does not co-operate in re-education or re-employment unless assured that his pension will not be affected thereby. When an invalided soldier is discharged and passed on for re-education, he and his family are maintained at the expense of the government. While he is receiving his training a special scale of pay and maintenance is allowed, which varies with the size of the family. In other words, the pension to which he is entitled by his disability is supplemented by a special allowance for such time as his training may occupy, the purpose being to have the man engage in any new occupation which, with his pension, will make him comfortable. But while he is learning that occupation, the government supplements his pension by providing for his family.

In facing its own problem of returned soldiers, the United States has still time to profit by the experience of other countries. These were forced to organize under a driving necessity, while we still have the opportunity, if we grasp it at once, of constructing a plan in advance which will ensure a far higher degree of therapeutic success than has ever been attained before, and which at the same time can be counted on to reduce the government's pension liabilities to its soldiers. The diagram which accompanies this article shows what seems to be a humane and practical program for meeting these new responsibilities.

We may assume that the United States will maintain 600,000 troops for service for one year in Europe, and that ten per cent

of them, or 60,000 men, will be returned invalided to this country during that year. The following plan, while based on that assumption, is modifiable in accordance with the number of troops involved. The figures given in it are tentative, although they are sufficiently accurate to indicate how the different kinds of casualties will be distributed.

From overseas, the invalided troops must be returned home promptly, as it will be inadvisable, except for the treatment of those likely to be returned to the colors in a comparatively short time, to maintain large hospital bases in Europe. On the basis of 60,000 troops returned each year, there would be 5,000 a month, or a weekly transport of hospital ships carrying more than 1,200 invalids. During the voyage all papers should be made ready for presentation to the authorities at the port of arrival. On reaching port, a small number of the invalids would probably be detained in the quarantine hospital by reason of contagious diseases or of sudden and unexpected illness arising during the voyage. The bulk of the invalids would pass directly to the reception building of the examining station. This reception building must be extremely elastic, as, in view of the difficulty of transportation, ships could not be expected to arrive at regular intervals. The hospital division of Ellis Island furnishes an ideal situation and equipment for the examining station. The invalids would remain from three to six days at this point, long enough for thorough physical and mental examinations. The examinations would have the following purposes:

1. To determine whether the disability were actually acquired in the line of duty or whether, as is often the case, it had preexisted and had escaped observation during a hurried or imperfect examination for enlistment.

2. To determine the exact nature of the disabilities, as well as the personalities of the individuals.

These facts will be determined by medical men working in collaboration with laboratory workers, psychologists and social investigators. The medical men would consist of physicians, of general and special surgeons, of eye, ear, nose, and throat specialists, and specialists in nervous and mental diseases—say twenty. All would work in co-operation with a chemical and bacteriological laboratory and a department of social investigation. This latter would make psychological examinations of the invalid, would determine his vocational aptitudes, investigate his family, his previous civilian

employment, the amount of remuneration he received before enlistment, and other details of this kind. Too much stress cannot be laid upon the importance of a thorough investigation of the social features which make up an individual's personality, and the changes wrought in it by the present situation. A knowledge of the soldier's attitude, to be again referred to, is essential to a wise selection of treatment.

3. The Examining Board would fix as a matter of record the exact condition of the individual at a stated time. This record would always serve as a check on subsequent claims for injuries said to have arisen from the war, but which were in reality due to other causes. "Substitution of origin," a common occurrence in all injuries for which compensation is claimed, would become impossible under a method which demonstrated constitutional defects at a given time. For example it would be impossible for optic atrophy to be accepted as an injury of war, if at some antecedent period a positive Wassermann had been recorded.

The reports of the examinations from the various departments would be forwarded to the Distributing Board, which would decide the next step for the invalided soldier. Of the 5,000 monthly arrivals, 1,600, or about a third, would be immediately discharged, with recommendations as to employment, with or without pension. A small number might be returned to the colors. There would be left approximately 3,400 listed as requiring treatment, the particular treatment being determined by the Distributing Board acting under the advice of the Examining Board. The Distributing Board should consist of three men of superior ability, one of whom should have experience in nervous and mental diseases.

The examining station is the central point of the whole plan, which is based on the therapeutic principle that diseases in bulk should be classified before they are treated, and that handicapped persons must be thoroughly understood before they can be advised wisely. Never before have medicine and kindred sciences been prepared to undertake the great task of the healing and reconstruction of incapacitated and enfeebled men. But they can succeed only if the different classes of cases are so divided that each case obtains the particular kind of treatment and environment necessary to it. It would be foolish to expect much of any treatment if the insane, the tuberculous, and the neurotic were indiscriminately herded together; and the lack of construc-

tive success in this and other wars is largely attributable to the failure to observe this fundamental. If the categorization effected by the central clearing house is effective (and it can be made so), and if both disability and personality are accurately estimated, the various hospitals, clinics, colonies and re-education centers to which patients pass from the clearing house, promise to make soldiers' homes less conspicuous features in the landscape and to return to civil life a greater proportion than ever before of men able and willing to support themselves.

The highly diversified character of the disabilities created or brought to light during military life, requires a great variety of institutions for treatment. In addition to general medical and surgical hospitals, there must be convalescent homes for those enfeebled rather than disabled, sanatoria for consumptives, and colonies of various kinds at which outdoor work can be taken up, little by little. Vocational training is an important part of the scheme, especially for those whose disability forces them to find a different occupation than the one they had before entering the army. This feature involves questions concerning the soldier's personality, and also has associated with it such perplexing questions as the rating of pensions, attitude of trade unions, state versus federal supervision, etc. The nervous casualties require a high degree of differentiation in their treatment. The insane should be carefully segregated from those whose mental disturbances are susceptible of more prompt recovery—the hysterics should be kept by themselves, and special education centers will be found necessary for the care of the disorders of speech and hearing so frequent in this war.

It seems at first sight a staggering program. But there is no way of avoiding it if we send large numbers of soldiers to France, and there will be no less difficulty in meeting it if separate institutions are provided for the different classes of cases than if all are thrown into a common melting-pot.

As will be seen by reference to Table I, the invalids will arrive in such large numbers each month that each class of cases will more than fill any but the largest hospital. It is, consequently, evident that there will be no loss in economy by keeping the different classes by themselves.

It is obvious that the returned invalided soldier should be under military control up to and through the examining station. It seems extremely important that this control should persist

Table I.—Showing the number of cases per month which will require admission to classified institutions. Based on 40,000 undischarged invalid soldiers a year.

Gun shot wounds, shrapnel wounds, etc.	833
General cases—organic diseases—undetermined	400
Nervous and mental diseases	400
Eye, ear, nose, throat diseases	333
Bone, joint and muscle diseases (Arthritis, synovitis, certain deformities, ankylosis, stiff joints and rheumatism, etc.)	333
Heart and lung (not tuberculous) diseases	333
Tuberculosis	233
Amputations	200
Kidney cases	100
Gastro-intestinal cases Venereal and skin cases Special types—trench fever—gassing, etc. Disciplinary—incorrigibles, etc.	168

through continued treatment, and that, with the exception of those for the chronic insane and the tuberculous, all institutions should be under the command of medical army officers. The soldier has been so long sustained by discipline that he cannot afford to have this prop suddenly taken from him during convalescence from illness.

An invalid soldier's mental state presents certain resemblances to that of a person injured through the carelessness of someone else, or to that of an injured workman who, during the period of his disability, is entitled to be supported by some system of compensation. In all there is a feeling of indignation that their person has been violated, and a resentment toward the instrument through which the violation occurred. This feeling may not be altogether conscious to the individual, or appear in his speech, but becomes evident from his general deportment as shown by lack of earnest efforts to get well. Examples of this in civil life are numerous. In civil actions for personal injuries of a nervous character, those who seek redress through the courts must maintain a resentment through the long delay inevitable to legal procedure. If the resentment disappears, the symptoms go too, and thus vanish the hopes of a substantial verdict. Workmen's compensation acts affect the minds of injured and pensioned work-

men in much the same way. They tend to arouse desires to "get even" or feelings in the individuals concerned that they are now entitled to be taken care of. They make disability more lasting than it would be if the injured person were under the compulsion of getting well as fast as he could. They tend to convert the normal desire to get well into a too keen appreciation of the advantages of staying ill. These same factors have to be considered in the treatment of a returned soldier, whether his disabilities be surgical or medical. In either case treatment has to be outlined with a view toward combating the idea that since the soldier has been injured through no fault of his own, he should be supported indefinitely by the country for which he has bled. He may be entitled to it, but the idea is not good for him.

In the past the pathos of the soldier's situation has obscured a clear vision of the rational way out of it. The sympathetic appeal wrought by sightless eyes, by empty sleeves, by strong men hobbling along on wooden legs, and the knowledge that men thus crippled have become so solely under the call of duty and stress of circumstances, has created a tradition that the country must first of all comfort these injured sons of hers. But long experience has taught that the best comfort and the truest compensation is more surely attained by a discipline which makes men help cure themselves than by an emotional and solicitous care. Men can only cure themselves by being prevented from "lying down" and by being taught to use such energies as they have left for their own reconstruction. An hysteric who sues for personal injuries, gets well after litigation is over. But for a pensioned man there is no such turning-point and, consequently, the natural tendency is for him to live on his pension without working. As long as he does this, nervous states will persist which cripple personal usefulness just as seriously as surgical injuries. The principle of the continuation of discipline, or obedience, regularity, and order during a treatment that may not always fall in with the soldier's personal inclinations, is imperative to the cure of the neuroses which form so important a factor in the disabilities of returned soldiers.

The final feature in the plan which has now been outlined is the creation of federal and state boards of re-employment, which shall meet the returned soldier at all points of discharge, and facilitate his return to self-support and independence in the civil community.

The problem, therefore, which confronts this country is definite. Provision must be made to meet what promises to be the greatest medical emergency we have ever faced. A commission appointed now, could in two or three months construct a plan which would provide for most of the contingencies. This commission would gather all the information accumulated from allied countries; it would secure, provisionally, the services of medical men qualified in the different specialties, who would accept commissions in the Medical Reserve Corps if called upon; it would accept or obtain options on the offers of lands, buildings, equipment, etc., now so freely tendered, and would survey them with a view to their specific usefulness. The saving to the government effected by such preliminary work could be counted in millions of dollars, to say nothing of the untold saving of human happiness and usefulness.

THE USE OF INSTITUTIONS FOR THE INSANE AS MILITARY HOSPITALS*

THOMAS W. SALMON, M.D.
Medical Director, The National Committee for Mental Hygiene

IN January 1915, when the pressure upon the Royal Army Medical Corps to provide additional hospital beds for wounded soldiers became acute, the Board of Control was asked by the War Office to co-operate in an attempt to secure 50,000 beds. All other government departments having institutions under their control were also asked to assist. The Board of Control formulated a plan whereby 92 county and borough asylums were to be divided into ten groups and one institution in each group vacated of its patients and turned over to the War Office as a military hospital. It was planned to provide in this way 15,000 beds or almost one third of the total number required. The methods by which this plan was put into execution were so thorough and expeditious that an account of how it was done may be useful to those who may be confronted with a similar task in this country if the fortunes of war should demand it.†

As soon as the plans of the Board of Control had been formulated a circular (Circular A—Use of Asylums as Military Hospitals) was sent out to all chairmen and clerks of Visiting Committees and all Medical Superintendents. A copy of this circular, a circular giving the observations of the War Office on the plan (B–Use of Asylums as Military Hospitals), and the letter which accompanied them follows:

A. USE OF ASYLUMS AS MILITARY HOSPITALS

Scheme, prepared by the Board of Control, for the general administration of vacated asylums, and the details of reimbursement which the War Office undertakes to make to receiving and vacated asylums.

I. *Charges arising from the maintenance and treatment of sick and wounded soldiers in Asylum Buildings, which the Army Council undertakes to meet.*

1. VACATED ASYLUMS

(a) Charges in connection with buildings and equipment.

i. Necessary adaptations of the buildings for hospital purposes.

ii. Maintenance and repairs of premises.

iii. Reinstatement of premises at end of occupation by Army Council.

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*Appendix 2 of the report to the Surgeon General.

†Very interesting articles by Lt. Col. D. G. Thomson (*Journal of Mental Science*, 62: 109–35, January 1916) and Major R. D. Hotchkiss (*Journal of Mental Science*, 63: 245–49, April 1917) give accounts of the measures taken in England and Wales to convert county

iv. Additional equipment found necessary: *e. g.*, hospital requirements, extra beds, etc.

NOTE:—All extra equipment purchased at the expense of the War Office which remains in stock at the conclusion of the war, is to be regarded as the property of the War Office, but may, if the asylum authorities so desire, be taken over by them wholly or in part at a valuation.

(b) Charges in connection with the maintenance of staff and of soldier patients.

i. Salaries and wages, including fees to surgeons and other experts, and remuneration of other persons called in to supplement ordinary staff.

ii. Victualling on scales laid down by Army Council.

iii. Uniform for staff and clothing for patients.

iv. Furniture and bedding. (Renewals and repairs.)

v. Medicines, surgical appliances and instruments.

vi. Fuel, lighting, washing and other necessaries.

vii. Rates, taxes and insurance.

viii. Incidental expenses, including travelling, burials, etc.

2. RECEIVING ASYLUMS

Charges in connection with the maintenance of lunatics.

i. Additional weekly cost of maintenance, if any.

ii. Equipment and stores required for additional numbers and extra cost of maintenance and depreciation.

iii. Any necessary slight structural alterations necessitated by increased numbers, extra wear and tear, and reinstatement of premises.

3. COST OF ALL NECESSARY TRAVELLING AND CONVEYANCE OF LUNATICS

II. *General Arrangements.*

1. The War Office will be solely responsible for the medical care and treatment of the soldiers and the management of the hospital.

2. The asylums will be handed over as going concerns with the whole of their staff, medical, engineering, stores, farms, etc., and such part of the nursing and attendant staff not needed to accompany the patients to the receiving asylums. The portion of the nursing staff retained at the asylum should be that portion best suited to take up or assist in the care of the sick and wounded.

3. The War Office will appoint the additional medical and nursing staff required for the hospital. The visiting committee and the medical superintendent will generally, from their local knowledge, be able to suggest suitable persons for employment in addition to those already in War Office service.

4. Subject to the directions of the committee, the medical superintendent is the head and director of the asylum administration, and in most instances, no doubt, he will be appointed by the War Office to be the officer in charge of the hospital. If so appointed he will continue to exercise the general control over the institution and its staff and working, for which his experience specially qualifies him. The other medical officers of the asylum will ordinarily be qualified and willing to become part of the medical staff of the hospital, and to share the duties with the additional professional staff sent by the War Office.

5. The whole of the asylum staff is in the employment of the visiting committee by whom they are appointed and by whom they can be dismissed. They are in established pensionable service, and it is necessary that their asylum service should be unbroken, except for misconduct. If in any instance it is expedient that the head of the hospital should be an

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asylums into war hospitals and particularly of the conversion of the institutions of which they were superintendents, namely, the Norfolk County Asylum and the Renfrew District Asylum, respectively. In the discussion of Col. Thomson's paper (*loc. cit.*) other superintendents of institutions which had been converted into war hospitals gave their experiences.

officer other than the medical superintendent, it is desirable that he should delegate the lay administration of the institution to the committee which, from experience and local knowledge, is obviously the authority best qualified to carry it on. The medical chief will thus be relieved from many laborious administrative tasks. The delegation may be subject to such conditions as are thought reasonable.

6. The War Office has decided that military rank shall be conferred on the members of the medical staff. If an officer of higher rank than the medical superintendent is sent to the hospital, it is desirable that the general administration of the institution should be delegated to the medical superintendent, or at any rate in practice left in his hands. As regards the male attendants, it may be thought necessary, as has been done at the state institution at Moss Side, to incorporate them in the Red Cross organization.

7. The committee will continue to make contracts for supplies, and otherwise carry on the business side of the administration, will open a fresh banking account from the date when the War Office are in possession, and the clerk will each month present to the War Office an account, certified as the War Office may require, of the expenditure incurred. These accounts will be audited as heretofore by the asylum auditors with any additional precautions which the War Office may require. They should be transmitted to the War Office through the Board of Control who, after such enquiry—if any—as they think necessary, will append their certificate that the claim is a proper one to be made on the War Office.

The committee will be informed by the War Office what stores, etc., can be supplied by that department, and what must be contracted for locally.

The necessary funds to meet expenditure on structural alterations, additional equipment, expenses on travelling and conveyance, etc., will be advanced by the War Office as soon as a decision is reached that an asylum is to be vacated.

Claims for such advances should be transmitted through the Board of Control.

B. USE OF ASYLUMS AS MILITARY HOSPITALS

Observations by the War Office supplementary to their general confirmation of the scheme prepared by the Board of Control:

1. VACATED ASYLUMS

(a) Charges in connection with buildings and equipment:

ii. Maintenance and repairs of premises.

In case of considerable repairs constituting permanent structural improvements, the Board of Control will no doubt be prepared to advise to what extent credit can be given to the War Department for these in the final settlement.

iii. Reinstatement of premises at end of occupation.

It is presumed that a complete inventory will be taken before occupation.

iv. Additional equipment.

It is presumed that complete accounts will be kept of equipment furnished by, or purchased at the expense of, the War Department.

(b) Charges in connection with the maintenance of staff and of soldier patients:

i. Salaries and wages.

It is presumed that the visiting committee will actually pay (at War Department expense) the present salaries of the retained asylum staff, and any persons temporarily engaged, and that the War Department will pay direct its own officials. This is merely a matter of machinery, and will be pursued in the communication referred to in paragraph 7 below. The rates to be paid for any persons temporarily engaged will be settled by the War Office.

ii. Victualling.

Presumably consumable stores taken over will be valued and the cost credited to the asylum authorities.

It is presumed that appropriate accounts of consumables, etc., whether supplied by the War Department or purchased on their behalf by the asylum authorities will be kept, and that these accounts will be available for inspection, if desired.

Medicines and medical and surgical equipment when not taken over with the asylum will be provided by the War Office or under arrangements approved by them.

Receipts Generally.

It is presumed that the produce of asylum farms will be available for use, and that the War Department will be allowed credit for produce sold. Also the War Department will receive credit for the grants received by the asylum authorities in respect of any harmless patients retained for work on farms or grounds, since they will be maintained out of general maintenance of which the War Department is bearing the cost, and generally that any receipts arising out of the ordinary working of those institutions while they are in use by the War Department will be taken in reduction of the working expenses chargeable against the War Office.

2. Receiving Asylums.

(i) Additional weekly cost of maintenance, if any.

It is presumed that the authorities of the vacating asylum will continue to draw their grants in respect of patients transferred and of patients who would be sent there but for War Department occupation, that the vacating asylum will pay to the receiving asylum the weekly cost of maintenance therein, and that the War Department will refund to the vacating asylum the excess in cases where their grant is less than the weekly cost in the receiving asylum.

In cases in which the weekly cost is less, this department would not propose that the saving should be taken into account unless the saving is of material amount, in which case the charge under (ii) below should apparently be abated.

(ii and iii) Equipment and stores required.

It is presumed that an account will be kept of the additional equipment, and that such equipment may be taken over on evacuation at a valuation as in case of vacating asylum. This department will readily fall in with your views as to the manner of payment for these services.

General Arrangements.

(2) If a portion of the staff is transferred to a receiving asylum, it is presumed that the salaries will not be a charge for the War Department.

(3) After "nursing" in line 1, add "or other."

(4) After "War Office" in line 3, add "under the general officer commanding-in-chief of the command concerned."

(6) Delete the first three lines and substitute, "If the War Office in any given case should appoint an officer of senior rank to the hospital it is desirable that the general. . . ."

(7) It is suggested that when an asylum is taken over, an advance be made by the War Department on the recommendation of the Board of Control on the basis of a month's (or quarter's) estimated expenditure (plus initial costs in the first instance) and that periodical accounts should be rendered to the War Department through the Board of Control as suggested. A further communication will, however, be addressed to the Board of Control as regards the procedure in rendering accounts, but this department will be prepared to make advances as soon as desired.

"The Board of Control,
66 Victoria Street, S. W.,
10th March, 1915.

Sir:

I am directed by the Board of Control to transmit to you a copy, "A," of the scheme prepared by the board for the general administration of the vacated asylums, and the details of reinbursement which the board suggested the War Office should undertake to make to receiving and vacated asylums.

The board, on the 6th instant, received from the War Office a letter expressing the general concurrence of the Army Council with the detailed financial arrangements mentioned above. A statement was enclosed setting forth some minor points on which it appeared to the Army Council desirable to arrive at a clearer understanding, and on which they thought the statement might perhaps with some advantage be modified. It was also added that the actual details regarding staff requirements, technical equipments, and the like, will be settled by arrangement with the War Office in each particular case.

A copy of the War Office statement—marked "B"—is herewith enclosed. It is to be observed that on page 1, under "Receipts Generally" the view is entertained that the accounts of the farm at the vacated asylum would be included in those of the War Office. The board, however, contemplated that the asylum farms would be managed by the visiting committees; that the accounts would be kept separately from those relating to sick and wounded soldiers; and that supplies of vegetables and other produce to the hospital would be charged for at reasonable prices, say current market rates, and would be debited to the War Office account. Inasmuch as many of the farms are big enterprises with considerable stock (both live and dead) the board think that this course would be preferable and generally more equitable than the alternative of including the entire farm accounts in the accounts for soldiers. The War Office have, however, stated that either of these alternative methods would be agreeable to them; it is a point that easily lends itself to adjustment between now and the date when the asylums are handed over.

The board agree that it would be right that expenditure in respect of harmless lunatic patients retained at the hospital should be charged in the War Office account and that credit should be taken therein of all sums received from guardians in respect of their maintenance. The effect of this arrangement will be that no charge will fall on the War Office.

Under No. 6, on page 2, the board understand that the War Office are prepared to grant military rank to certain members of the medical staff, and that the omission of the words "The War Office . . . Medical Staff" in the first lines was not intended to affect the decision.

With regard to the second paragraph on page 2 commencing "In cases in which the weekly cost is less . . . " the board, as some of their members have explained when this question has come up at conferences, are of the opinion that the Lunacy Act appears to require that not more than the actual cost of maintenance be claimed from the guardians, and if this principle is adhered to the question of an abatement to the War Office—as referred to in this paragraph—will not arise.

The board have given careful consideration to all the points set out in the War Office statement. They are of the opinion that none of them conflicts with any of those in the board's scheme. The latter was based on the conditions upon which the various asylum authorities so willingly promised their assistance, and the board have confidence that they will agree that the interests of the ratepayers and the position of the visiting committees have been amply and properly safeguarded.

In gladly accepting the offer of the nine asylums to be vacated, the War Office have stated how much they appreciate, not only the willingness of the authorities and staff of those institutions to place them at their disposal, but also the hearty co-operation of the authorities and staff of all the receiving asylums, without which they realize that the scheme would not have been practicable.

I am,
Sir,
Your obedient Servant,
(Signed) O. E. DICKINSON,
Secretary."

The first employment of this plan made about 12,000 beds available. Since then additional institutions under the Board of Control, and under the boards exercising similar functions in Scotland and Ireland, have been taken over for military purposes. On July 1, 1917, twenty-one such institutions with a total capacity for military patients of 27,158, had been made available for the use of the War Office. A list of these institutions showing their capacity as civil institutions and as military hospitals and indicating those which have been used for mental and nervous cases is given on the following page.

In all cases, even where the military hospital was to be used for insane soldiers, the name was changed "to escape the asylum tradition." This is a pathetic reminder of the stigma which still clings to mental diseases and institutions for their care in England. The old names of these institutions with their "asylum traditions" are still good enough for the wives, mothers and daughters of soldiers. It is earnestly hoped by the men in England who are striving to change this popular attitude toward mental illness that, when the war is over, the new names will be retained and the word "asylum" will be permanently replaced by the word "hospital."

The transfer of upwards of 15,000 insane patients was successfully and safely made, although not without distressing incidents. Col. Thomson said that in his institution he was surprised to see the attachment which old patients felt for the place which had been their home for so many years—in some cases from childhood. The other institutions were able to absorb these great additions to their population but only with considerable inconvenience and some hardships. Not a few patients were taken home by their friends. Partly as a result of the inability of the overcrowded institutions to take new cases except in emergencies and partly as a result of the reluctance of relatives to send patients to distant institutions, the admission rate from the civil population of

County and Borough Asylums which have been Vacated of their Patients and Converted into Military Hospitals, July 1, 1917

Former name (as a civil institution)	Present name (as a military hospital)	Capacity		
		Former	Present	
England:				
Newcastle-on-Tyne City Asylum, Gosforth, Newcastle-on-Tyne.	The Northumberland War Hospital.	884	1,179	
West Riding of Yorks Asylum, Wadsley (New Sheffield).	The Wharncliffe War Hospital.	1,699	2,265	
Lancashire County Asylum, Winwick, Warrington.	*The Lord Derby War Hospital.	2,248	2,997	(1)
Birmingham City Asylum, Rubery Hill, Birmingham.	The 1st Birmingham War Hospital.	1,397	2,363	
Birmingham City Asylum, Hollymoor, Birmingham.	The 2d Birmingham War Hospital.			
Norfolk County Asylum, Thorpe, Norwich.	The Norfolk War Hospital.	1,045	1,393	
West Sussex Asylum, Chichester.	The Graylingwell War Hospital.	729	972	
Bristol County and City Asylum, Fishponds, Bristol.	The Beaufort War Hospital.	937	1,249	
London County Asylum, Horton, Epsom.	The Horton (County of London) War Hospital.	2,174	2,899	
Middlesex County Asylum, Napsbury, St. Albans.	†The County of Middlesex War Hospital.	1,800	1,520	(2)
Middlesex County Asylum, near Tooting, London, S. W. (block for defective children).	*The Springfield War Hospital.	250	278	
Northampton County Asylum, Berrywood, Northampton.	Northamptonshire War Hospital	997	1,329	
The Maudsley Hospital, Denmark Hill, London, S. E.	‡Part of the 4th London General Military Hospital.	(3)	200	
Lancashire County Asylum, Whalley.	Queen Mary Military Hospital.	(4)	3,000	
Hampshire County Asylum, Park Prewett.	Park Prewett War Hospital.	(4)	1,000	
Moss Side State Institution, Maghull (near Liverpool).	*Moss Side Red Cross Military Hospital.	(5)	345	
London (Manor) County Asylum, Epsom.	Manor (County of London) War Hospital.	1,085	1,447	
Wales:				
Cardiff City Asylum, Whitchurch, Cardiff.	The Welsh Metropolitan War Hospital.	729	972	
Scotland:				
Renfrew District Asylum, Paisley.	†The Dykebar War Hospital.		850	
Perth District Asylum.	†The Murthley War Hospital.	(?)	400	
Ireland:				
The Belfast District Asylum, Belfast.	†The Belfast War Hospital.	(?)	500	

* For nervous cases. † For mental cases. ‡ For mental and nervous cases.

(1) 1,000 beds for mental cases. (2) 350 beds for mental cases. (3) New psychopathic hospital; never occupied. (4) New institution for the insane; never occupied. (5) New institution for mentally defective delinquents; never occupied.

England, Scotland and Ireland has shown a considerable reduction. In the United States we have ample evidence of the effect upon the admission rate of the standard of care provided by public institutions and have seen how easy it is, in states which shirkt heir responsibilities in this matter, to force the insane back upon their homes. In many of the hospitals from twenty to eighty of the quiet male patients able to work remained—usually in detached villas. Such patients are happy and carry on the work with which they are familiar in the novel surroundings of a military hospital.

The total cost of turning over these institutions was not ascertained. In the case of the Norfolk Asylum it was $90,000.00.

The capacity of the institutions was almost invariably increased, the average ratio being 4:3. This is due to the fact that most of the day rooms could be used as wards and dormitories, so large a proportion of medical and surgical patients being bed patients.

A revolution came into the lives of the personnel of these institutions. The medical superintendents, with one exception, were left in charge of their institutions, receiving commissions as lieutenant colonel or major (temporary) in the Royal Army Medical Corps. Most of the junior physicians were also commissioned in the Army and retained at their hospitals. The male attendants were enlisted in the Royal Army Medical Corps under a special arrangement. For them a safe and easy way of "doing their bit" in the war was provided at the cost of a slight decrease in pay. This solved for the superintendents the perplexing problem of keeping their employees. Responsible employees became noncommissioned officers, and some helpers, ineligible for military service, were retained as civilian employees. The female attendants became probationers in the nursing corps. In most cases the change was satisfactory. Many of the younger women have been attracted by the work of general nursing and will probably complete their training after the war. All will be better attendants for the training they have received. In the case of a few older female attendants who had not had the advantage of a regular nurses' training but had filled places of responsibility, some friction developed. The general spirit, however, has been that of hearty good-will in the new work. This has been due in large measure to the great part which the war has come to play in the lives of Englishmen and Englishwomen and the deep feeling of obligation to serve their country which inspires people in all

stations of life. It is very doubtful if such an enormous and difficult task as the conversion of these institutions to another purpose could have been successfully accomplished without patriotic submergence of self-interest by officers and employees.

In the institutions which are used as military hospitals for mental cases (see list, p. 360) the changes made were less radical. The male attendants received 6d. a day more than their regular pay as enlisted men in the Royal Army Medical Corps on account of caring for mental cases. The female attendants presented a difficult problem in these hospitals, as female attendants are not yet employed in male wards in English hospitals for mental diseases. In one hospital (Dykebar) it was found possible to staff several wards with female nurses although a male orderly is on duty in each. Bed cases are cared for in this hospital by female nurses. A detached villa for convalescent patients is entirely in charge of female nurses. Another villa in this hospital was entirely staffed with female nurses but the type of patients was not just suitable and further complications arose from the fact that the charge nurse married a patient upon his discharge and this interfered with conditions apparently necessary for good discipline. Other wards in the hospital have female nurses and they are assigned to the distribution of food. At night the whole institution is under an assistant matron who has three female assistants, a sergeant and ten male orderlies. One outcome of the conversion of the institutions seems likely to be the employment of female nurses in men's wards in civil institutions in England. No one who has seen the success with which this is done in the United States and its rapid extension as a result of its efficiency and the increasing difficulty of securing good male attendants will regret it.

The impression one gets in visiting the military hospitals which have been created out of civil institutions for the insane is that an enormously difficult task has been accomplished in a wonderfully efficient way. Great credit for this is due to the Board of Control for the thoughtful planning of the transfer in advance, but its success is due also to the remarkable unanimity with which visiting committees, medical superintendents and employees co-operated in removing obstacles and subordinating all other considerations to the successful solution of the entirely unprecedented problem before them. Most of the institutions are of the cottage type with many small detached buildings. They have proved exceed-

ingly desirable general hospitals and it is doubtful whether any other institutions in England would have provided such excellent facilities for ill and wounded soldiers. Nevertheless one's thoughts turn to the helpless insane, never too well provided for, who were turned out of their hospitals and whose comfort as well as chances for recovery must have been seriously impaired by the change. The necessity was so great that these considerations could not be taken into account. If similar pressure comes to the United States and the interests of the insane or any other helpless group must be subordinated to the great object of winning the war, we shall have no choice, but we cannot help feeling that the task of vacating half the beds in the state hospitals of a state like New York would be undertaken with a heavy heart by those who know the needs of the insane, and who realize how little they share, even in time of peace, in the provisions which mitigate the sufferings of other ill persons.

THE BROADER PSYCHIATRY AND THE WAR*

HERMAN M. ADLER, M.D.
Director of the Juvenile Psychopathic Institute, Chicago

AT the entrance of the United States into the war it has become apparent that the ordinary haphazard methods of times of peace must be discarded. The President has urged upon the country serious consideration of the fact that for a successful prosecution of this war the entire resources of this country, both human and material, must be made effective. The various pursuits of business are being weighed with the view of discarding everything that is not essential to the waging of war.

It may be well, therefore, to examine for the moment the place of psychiatry in the general scheme of organization for war. According to the general conception, psychiatry deals individually with the problems of insanity, feeblemindedness, and related psychopathic states. That war carried on under the terrific modern conditions has largely increased the problem of mental diseases is apparent from a study of the reports from the European belligerents during the first two years of this war. The United States is profiting by the lessons learned abroad and is adopting the plan of the National Committee for Mental Hygiene to incorporate in the medical service of the Army and Navy special units which deal with mental diseases. The psychiatrist who wishes to serve with the colors will find an opportunity here for applying his knowledge in connection with the military and naval operations.

There is, however, a large field of activity in which the psychiatrist and psychologist must take a leading part which has been much neglected in times of peace and which, under conditions of war, is in great danger of being entirely pushed into the background. It is of the utmost importance in the interest of national organization that such oversight should be prevented.

This wider field of activity for the greater psychiatry includes not only the recognized problems of insanity, feeblemindedness and psychiatric states in general but a large group of phenomena, mostly social in their bearings, such as delinquency, inebriety, prostitution, and various phases of delinquency and social failure.

*This communication embodies remarks made by the author at the annual meeting of the Chicago Neurological Society, May 18, 1917.

While these problems are now dealt with largely from the legal or social point of view, there is great need for the application of a more medical point of view. With changing conditions brought about as a result of the increased concentration of population in urban communities the general problem of human personality has come to be one of the important issues of social organization. Individual variations of character and the accidents of life, which occur where there is little elbow room for personal peculiarities, have forced society to call with increasing frequency upon specialists in mental abnormalities to help elucidate widely diversifying social problems. The agencies of the law and the forces of industrial organization have dealt with these problems for some time on the basis of the greatest good for the greatest number. This has resulted in general policies which while sound in the main are not always applicable in the individual case. The medical point of view which concerns itself chiefly with the individual problems rather than with general policies is essential. Since by far the majority of the population may be considered healthy, the problem presented by the minority of socially inadequate individuals does not appeal to the public as one of pressing importance. The enormous resources of the community are such that in times of peace they readily compensate for the lack of adjustment in this regard.

Under the conditions of a war of the magnitude of that into which the United States has just entered it must be clear to any thinking individual that this margin of safety will be largely wiped out. We can no longer neglect the serious problem of the delinquent and the dependent because of a misplaced confidence in the reserve strength of the country. The experience of the nations of Europe during the first two years of the war is sufficient evidence that the solution of these problems cannot be left to chance but that a definite and purposeful plan must be devised to enable us to deal properly with the various phases of the greater psychiatry. The first duty in preparing a plan of this sort will be to change the prevailing opinion in regard to the nature and object of psychiatric service in general. At present the public has the conviction that the problem is largely one of segregation. The function of the psychiatrist becomes almost entirely that of passing opinion on the committability of the patient suffering with symptoms of mental disease. At a time when it is important to maintain every individual as a safe free member of the commu-

nity the exactly opposite point of view is the one which should prevail. The result of the present method is that huge sums of money are annually expended upon the maintenance of institutions for the segregation of the insane and feebleminded while there is very little provision for assistance to psychopathic individuals during the early or milder stages of mental abnormality. A patient must exhibit marked signs of disease before he can be committed and receive intensive care. But since these advanced cases do not offer a good field for constructive therapy, the result is that the work at the institutions is largely that of custodial care. If the emphasis is to be placed upon maintaining the psychopathic individual in the community as a self supporting and inoffensive citizen, it will be necessary to provide for proper classification at an earlier stage of all cases requiring psychiatric help so that intensive treatment will be concentrated upon the hopeful cases. The method of segregation should, therefore, be supplemented amply with provisions for dealing with early cases and for treatment to be offered in special institutions or in homes without raising the question of permanent commitment. The cornerstone of such an organization must be a center of authoritative information properly equipped to receive patients for a short period of observation, examination and treatment. Such institutions must above all be easily accessible to the general public. The psychopathic hospital, as it has been recently developed, is the proper nucleus around which the various activities of the courts and relief organizations can be grouped. The organization of the army medical service may be used as a standard in devising this psychopathic service. This organization calls for provisions for first aid immediately behind the firing line. From these units the patients are passed on to the field hospitals where the preliminary classification and most urgent treatment is applied. From the field hospital and distributing hospitals patients are either returned to the firing line or passed on to the base hospitals. The object of the service is to keep the men as long as possible on the firing line or to return them in the shortest possible time for active duty.

Applying this idea to the psychopathic service, the psychopathic hospital may be regarded as the field hospital or distributing hospital. The outpost duty, the first aid service, must be rendered as near to the actual fighting as possible—that is, in this case, in the courts, the out-patient departments, the dispensaries

and wards of the general hospitals, and in connection with the police and boards of health.

In the community work there is an additional problem which does not ordinarily occupy a prominent place in army medical service, viz., that of the juvenile cases. It has been the experience abroad that the effects of the industrial speeding up caused by the war, the employment of child labor in munition factories and other industries, and the relaxation of vigilance both in regard to schools and the home, has resulted in an enormous increase in delinquency. Aside from the social, industrial and legal aspects of this problem, there are other psychopathic considerations involved. This makes it imperative that any scheme for psychopathic organization should include ample provision for rendering psychiatric aid to the schools, the juvenile courts and the private relief organizations dealing primarily with children. In the larger cities it is perhaps wiser to deal with these problems under separate organizations—a juvenile psychopathic institute which should be parallel in its main characteristics of arrangement with the psychopathic hospital for adults. The officers who are rendering psychopathic first aid to the community in connection with the courts, police systems and schools, should be attached to the psychopathic hospital staff. With the psychopathic hospital as a receiving station or clearing house, it will be possible for these officers to reduce their examinations to a standardized minimum which will allow them to pass on practically all the cases presented in the particular court or school to which they are attached. This standard of minimum examination will disclose the cases requiring further study. These can then be referred to the psychopathic hospital for more thorough study or for more satisfactory classification and intensive treatment. From the psychopathic hospital the individuals suffering from the most severe forms of disease can thus be passed on to the custodial institutions while the milder cases may be returned to the community, either as recovered cases or under supervision. In order to make this work effective it will be necessary for the psychopathic hospital to maintain a dispensary or out-patient service to which anyone may come without the fear of being incarcerated. When the public realizes that the underlying idea of this service is not to seize and segregate as many cases as possible but to assist the individual to maintain his place in the community, there will be an opportunity for applying treatment in numerous cases which

under the present system would never appeal for aid. It has been one of the astonishing facts of the out-patient service in connection with insane hospitals that the numbers of voluntary applicants far exceeded all expectations.

Before such work can be effective the confidence of the public must be obtained. It is obvious that this cannot be done unless the patient and his relatives and friends have the assurance that the mere existence of psychopathic authorities will not make anyone liable to involuntary commitment. A very important point in this connection is the great need of sources of authoritative information. Unless this work is properly organized the public is in much the same position in regard to psychiatric work as it is in ordinary times in regard to general health problems. Public health service has accustomed the community to call in the services of experts guaranteed by the municipality, the state or the federal authorities in certain contagions. The boards of health are regarded as authorities on the subject of *diagnosis* of diphtheria, and exanthematous diseases. In the matter of *treatment* we are still very backward. It is interesting to note that in the field of mental diseases the public health officer is looked to more often for treatment than for diagnosis.

The psychopathic organization here outlined would serve to render both sorts of service to the community, viz., both diagnosis and treatment. The functions of the psychopathic service are (1) preliminary examination and first care and treatment for all cases; (2) intensive examination, care and treatment in special cases; (3) preliminary disposition in all cases: that is (a) return to the community with or without continued supervision; (b) transfer to custodial institutions, and (c) prolonged care at the psychopathic hospital; (4) investigation into the natural causes, treatment and prevention of mental abnormality and maintenance of mental health; (5) instruction of workers in this field and the dissemination of authoritative information for the benefit of the public.

The staff of this organization should include as heads of the various departments full time workers of high grade. The work may be divided into (1) clinical, viz., psychiatric and routine medical work with suitable laboratory service and provisions for medical and psychiatric treatment; (2) psycho-pathological, concerned with psychiatric investigation and mental testing; (3) nursing; (4) social service, which should include social investiga-

tion, follow-up and after-care work, education, occupation and various forms of personal service; (5) suitable administrative department to manage the routine business, and executive officers.

In considering the organization of such a service the question arises as to the authority under which it should operate. Since the care of the insane and feebleminded has become largely the function of the state rather than of the local community, it is not always clear where the line of division of labor between state and municipality lies. This is specially marked in those cases in which the mental abnormality is not sufficiently clear to cause the question of committability to be raised. The local communities, municipal and county, are still responsible for certain grades of delinquents and dependents. The result is that unless the question of feeblemindedness or insanity can be raised, these individuals can be dealt with without any consideration of the psychiatric needs. It may not be possible at the present time to organize a single institution of sufficient size, both in regard to the number of beds and the number of officers, to properly deal with the psychopathic needs of a large community. It will be necessary, therefore, for co-operation of effort on the part of state, county and city, so that the psychiatric service may be made available to the general public and to the courts, police, jails, schools, and relief organizations, both public and private. In times of peace this might be a difficult problem. When the country is at war, it should be easier.

A large psychopathic hospital under state authority can serve as a nucleus around which are grouped all the activities of the community regarding psychiatric service. The workers in the courts and schools may be co-ordinated with the psychopathic hospital staff regardless of the source whence they draw their salary.

The unattached psychiatrist who wishes to render a public service to the country in time of war will find an opportunity for sharing in the work of such an institution either in the dispensary attached to the psychopathic hospital, or the dispensaries or wards of the general hospitals, or in connection with the police, the jails and the courts.

In the work of prevention and in the treatment of the early cases, one of the most important instruments available is social service in its various specialties. With the increasing dependency and delinquency which is the inevitable result of war, the provi-

sions that the state can make or those of the private philanthropies, will unquestionably be entirely inadequate. It is here above all that the unattached psychiatrist can be of the greatest service. The efficient application of such funds as are available depends upon a careful classification of the individual case. The social worker requires professional guidance in mental cases in order to achieve satisfactory results. Individual effort while valuable will not suffice in this respect. The benefits of group activity are here most obvious. It will be necessary to work out standards and policies such as no individual has time or opportunity to do.

In the application of these policies and standards, furthermore, it is necessary that there be an element of elasticity which will enable the effort to be concentrated at various points and shifted from time to time as the occasion demands. By integrating all the activities under one single organization it will be possible to work out such standards and above all to increase the efficiency of the worker by the possibility of shifting him from one place to another as emergencies arise.

THE RELATION OF PSYCHOLOGY TO MILITARY ACTIVITIES

ROBERT M. YERKES
Harvard University

WAR is a product of the human mind: its pursuit involves every form of human behavior. The fighting machine includes organic, living elements, as well as the non-living or purely mechanical. Modern warfare is frequently described in terms of the non-human mechanism of destruction as though the consciously guided individuals who plan, construct, and operate these mechanisms were of minor importance. Obviously this is a mistake. Indeed, just because conscious behavior creates war, psychological problems inevitably confront the military expert at every turn. Germany has at least, and at last, convinced the world that scientific knowledge and conduct based thereon must be taken seriously. There is every reason to suppose that she has applied to her great task of world conquest, expert knowledge of human nature—mental constitution, behavior, vocational possibilities, human efficiency—much as she has utilized the facts of the physical sciences.

Happily the federal administration and the military authorities of our country are scarcely less alive than are men of science themselves, to the necessity for establishing at once effective working relations between the constructive scientific expert and the military departments.

Months ago the National Research Council was organized, at the request of President Wilson, to co-ordinate and mobilize the scientific resources and forces of the country in the interest alike of national defense and national welfare. This Council, under the able chairmanship of Dr. George E. Hale, has worked in intimate relations with governmental, administrative and military authorities. Recently, at the request of the Council of National Defense, it has agreed to serve during the war as a department of that body.

The Research Council, often at the suggestion of military officers, is referring to competent experts for immediate attention and solution problems of urgent importance to the Army and Navy. Thus chemists, physicists, geologists, botanists, physiolo-

gists, and psychologists are being called upon to render national service. This is one of the significant developments of our times; and although at present we are but traveling in the pathway which Germany has followed, it is almost certain that American inventiveness, resourcefulness, energy, efficiency, and our vast mechanical resources will shortly open new approaches to military superiority and will supplement, in a manner which she did not anticipate, Germany's demonstration that scientific knowledge begets "power."

The layman, when told that geologists, botanists, or psychologists, in their professional capacity, can render significant service to the military organization, finds it difficult to imagine how. He need only read Dr. Penrose's little volume "What a Geologist can do in War."* to be convinced that the facts and generalizations which concern geology may be extremely important to military officers and may at any moment predicate success or failure in a charge or in a campaign. Similarly, the botanist's knowledge of plant resources and properties may have much to do with the economy and efficiency of construction, organization, equipment, and maintenance of military mechanisms and forces. Finally, the psychologist comes to the front with the suggestion of varied lines of service. It is the purpose of this article to describe very briefly a few of the many things which he is eager to do and feels prepared to do for national defense.

Since the psychologist deals especially with the conscious activity of men, he should be a master in the description and valuation of human nature and an expert in the measurement of significant aspects of human response. In this capacity, recruiting offers him an important special task; that, namely, of classifying men according to their mental characteristics and of indicating their degree of adequacy for military training or special tasks in the military organization. By means of especially developed and adapted methods of psychological examining, it should be possible to gain information concerning each individual upon which may be based important recommendations to medical or to line officers.

It is commonly supposed that psychologists are eager to select and eliminate the feebleminded from the service, but those professional experts who are thoroughly conversant with the military

* J. B. Lippincott Company, Philadelphia, 1917.

situation and with the possibilities of their methods of examining, are far more interested in properly classifying men in the military service than in excluding the mentally defective. The fact is that in military, as in industrial organizations, reasonably suitable places can be found for those of little intellectual capacity, quite as readily as for those of great ability.

It is also fully realized by the psychologists who are preparing themselves for national service, that current methods of mental examining are unsuited to military demands and that consequently new and especially adapted methods must be prepared if the results are to be trustworthy and practically serviceable.

In connection with the preliminary handling of recruits, it is the prospective function of the examining psychologist first, to aid in the elimination of those who cannot safely render service worth their hire; second, to indicate various degrees and kinds of special ability and to relate them to the tasks of Army or Navy, so that each individual shall be placed in a position of maximum usefulness; and third, to detect those who by reason of mental instability or psychopathic condition demand the attention of the medical expert. Such individuals should be referred to the staff of the Neuro-psychiatric Hospital unit for special study.

Undoubtedly, the greatest opportunities for psychological service are the classification of men with respect to the relations of reactive capacity to military activities, and the elimination from Army and Navy of men who are either useless or dangerous because of extreme defectiveness or mental instability. Psychologists strongly prefer to emphasize the positive rather than the negative aspect of their work. Elimination seems to them far less important than the constructive service of increasing the recruit's value by finding just the right place for him.

It is said that the French have roughly classified their recruits, according to physical and mental characteristics, in four groups—the gastro-intestinal, the muscular, the nervous, and the respiratory—and that they have further assigned the men to military duty on the basis of this classification, placing in positions of special hardship and prolonged physical strain, the gastro-intestinal type; using for hard, continuous labor the muscular type; assigning to work which may at any moment make extraordinary demands for reserve energy and quick response the nervous type; and using for aviational service the best of the men of the respiratory type.

How much there is in this classification or in its suggested vocational significance, the writer is not prepared to say; nor has he definite knowledge of the precise manner, or the extent, of its application.

Aside from the examining of recruits for such purposes as have been suggested above, many interesting military applications of psychological measurements have been suggested by those especially competent to deal with the matter. Two or three of them will now be presented as examples of possible lines of psychological usefulness.

The first is the study of gunnery. It is highly probable that appropriate measurements of the responses of men to demands made on the naval gunner will shortly furnish data which are valuable, first, for the selection of those who are especially well adapted to this kind of service and, second, for the discovery of individuals who improve most satisfactorily under training. Psychological measurements, properly made, and specially chosen, might be of great value to the officer in charge of the training of gunners, just as educational measurements, which are now made in many school systems by or on the advice of psychologists, serve to guide the teacher in his educational treatment of pupils.

Already an experimental psychological study of naval gunnery is in progress.* The hope and expectation of those who are concerned with this task is that the method of measurement which is being used may yield results whose value as a basis for the selection of men and for the guidance of officers in the training of those who are selected may fully justify the National Research Council in recommending that competent scientific experts be commissioned to apply the method systematically in the naval service.

This task naturally involves the simultaneous or successive measurement of several important aspects or phases of the man's reaction. Thus quickness, accuracy, steadiness, endurance are important, and whether a man is well or ill fitted for naval gunnery depends in considerable measure upon these characteristics of his behavior.

Needless to say, the psychologists who are responsible for the organization and furtherance of the contributions of their profession to defense will not urge or even recommend the use of any psychological method by the government until trustworthy results

* Under the direction of Dr. Raymond Dodge.

have wholly convinced them of its practicability and importance. For they fully realize the seriousness of the nation's need and the folly of burdening over-taxed Washington officials with ill-considered, visionary, or inadequately developed plans.

Oftener than any other psychological military task, we hear mentioned today the examination of aviation recruits. It is true that this is an important opportunity for the psychologist and one which he has been eager to improve in Europe as well as in America. Psychological measurements are now being made* with the authorization of the proper military authorities on classes of aviation recruits who are being trained preparatory to their first lessons in the flying schools. These measurements, it is hoped, may lead to the development of a method for the wise selection of men for this peculiarly difficult and dangerous type of service. Presumably, few individuals are preëminently well fitted for it. The question which our psychological experts are asking is, "How may we most certainly and conveniently select the men who are well adapted for tasks of aviation, while at the same time eliminating all who are relatively ill adapted?"

The present plan of procedure is somewhat as follows: A series of measurements of various forms and aspects of reaction is made on each recruit. Later other measurements are made of his reactions as he is taught to fly. The first series of measurements is then studied in relation to the second; thus the psychologist hopes to discover which of his original measurements indicate the type of man who may be expected to succeed best in the flying schools.

Clearly the first stage of this work, as of all other attempts to make scientific measurement practically serviceable, is that of research. The next will be that of demonstrating the utility of the measurements. And the final stage, assuming the willingness of military authorities to avail themselves of the expert assistance of scientific men, would naturally be that of the selection of experts to examine all aviation recruits, in order that only the highly adequate men shall be selected for training.

In this connection it is worth our while to consider for a moment the possible cost in property and life of a single incompetent aviator. There is first the risk that he may needlessly wreck his machine, cause the loss of other ships, or fail to destroy his enemy's

* By a committee of which Dr. H. E. Burtt is chairman.

ship. These failures may in turn entail heavy losses to the forces which he is supposed to protect and finally his own life and perhaps that of many of his comrades may be sacrificed to his inadequate skill. Thus it may appear that to the incompetence of a single man, or rather to his lack of special fitness for his task, must be attributed the needless loss of thousands of dollars and of scores of valuable lives. When one views the situation in the light of such possibilities, one cannot for a moment question the desirability of using to the utmost our available scientific resources for the selection and training of the proper type of men in this and other lines of special military service.

What has been written of naval gunnery and of aviation is equally applicable to many other kinds of service, for an individual who is invaluable in connection with one task may be of little value for another. If psychologists—experts in the study of behavior that they should be—are not able to render signal service to the nation by discovering and indicating in practical ways the relations of human characteristics to special tasks, they certainly will deserve and receive but little consideration from their fellowmen of science.

THE STATE HOSPITAL AND THE WAR

WILLIAM A. WHITE, M.D.
Superintendent, St. Elizabeth's Hospital, Washington, D. C.

AT such a time as this, when all the resources of the nation are being marshalled, with the sole object of bringing the war to a successful issue, it is natural that everyone should ask himself what he can do to help or, if he is in a position of influence, how he can best utilize that influence. To one not familiar with the facts, it might be supposed that the patients in the state hospitals for the insane throughout the country were, by the very circumstance of their being patients in such institutions, incapacitated for taking any part whatever in helping to effect national preparedness or for supplying any energy that would assist the nation in prosecuting the war. Those of us who have lived in these hospitals for many years know that this is not so; that in the very large population of the so-called "insane hospitals" throughout the United States, in spite of the great and irretrievable loss of energy through misdirection, there is a very large amount of energy still available, energy which is still capable of being turned and, in fact, is being turned every day into useful channels of activity. What are some of the practical things that the state hospitals can do with this available energy?

First, and most important, the state hospital should attempt to become more nearly self-supporting; that is, they should try to produce, as far as possible, the various things that they use, so as to diminish the necessity of going into the market for them. This applies of course primarily at the present time to farm products. There is a food shortage that is, practically speaking, world wide, and very great efforts will have to be made in order that there shall be enough food during the coming year not only to supply the needs of our own people and to furnish food to our allies and to those who have been rendered homeless and helpless by the devastations of war, but also to furnish it at such prices as will not make its purchase prohibitive, and thereby indirectly tend to increase suffering. In view of this enormous and widespread demand for food, each state hospital throughout the country should undertake the cultivation of every bit of tillable soil of which it is possessed. I mean this literally. I mean that not only should all the ordinarily available farm land be used but there should be no hesitation in plowing up lawns, no matter how

beautiful they may be to look upon, provided their extent and the character of the land is such that a worth while crop may be expected. In addition to the large expanses of lawn which many state hospitals could put under cultivation, smaller and perhaps more numerous patches of ground in connection with the separate buildings, not worth while for the general farm force to attempt to utilize, could be cultivated by patients from the adjacent buildings who have not sufficient physical vigor to work on the larger farm plots but who could take care of these little patches. Such work is especially adaptable for women patients. Patients who otherwise might enjoy cultivating flowers could thus care for a small patch of ground perhaps ten feet square, and if these were multiplied about the place it would not only add to the productiveness of the hospital land as a whole, but it would have the very great additional effect of stimulating the patient population in a way that would be beneficial to themselves, to the hospital, and to the country.

Before proceeding further I may say that this psychological stimulation is very valuable. Throughout the state hospitals there are large numbers of patients who, under ordinary conditions, are prevented by the character of their mental illness from engaging in useful occupations. That indefinable thrill which a state of war sends coursing through every patriotic citizen is a wonderful activator for diverting such energies into useful channels, and I can think of no one thing that can so stimulate the whole patient population as to see the gardening activities going on in the way above described. Such plowing up of lawns and planting of small gardens at once exemplifies the meaning of the whole movement. It indicates the very great necessity with which the nation is confronted when hospitals which have always used large tracts of land simply for their beauty should be forced to destroy all this beauty and, so to speak, to utilize them in the production of food; it also indicates that element of sacrifice which is necessary in order that the nation shall attain its fullest powers. This sort of demonstration of the situation by the hospital authorities will help to start patients in the right direction, and may easily, for many of them at least, be the starting point of activities which will ultimately result in their recovery. This is a golden opportunity not only for bringing great and unexpected help to the country but also for helping the patients to a realization of the great truth that work is not drudgery but opportunity.

There are in the various state hospitals all sorts of industries; in general, brushmaking and broommaking, matmaking and chaircaning, shoemaking, tailoring, cement work, and various kinds of handicraft of the more diversional and artistic kind are the industries that are cultivated. Most of these industries have been kept at a relatively low output because, in general, it has been considered undesirable to introduce factory or machine methods of production, the reason for this being that the thing primarily aimed at in these industries was the useful and congenial occupation of the individual patient. Inasmuch as the products which were turned out by the various shops could be utilized only to a small extent, the hospitals for the most part having no outlet for any excess production, manufacturing efforts have been kept at a primitive handiwork level. I think that it would be distinctly wise in those states where there are several hospitals under a central authority, whether a commission, or a board of control, or whatever it may be termed, to make an effort to increase the output in these several shops, and where there is at present no outlet for over-production then it would be wise to have each hospital specialize in the manufacture of a few articles. One hospital might, for example, put in the necessary machinery and make shoes not only for its own consumption but for all the hospitals, while another hospital might specialize, let us say, in brooms and brushes, another perhaps in furniture, etc. I am satisfied that if this were done we would find that in states where there are several hospitals all of the ordinary manufactured products could be made by the patients, and I also feel satisfied that, in many instances, if the most modern machinery were installed a great amount of material could be manufactured over and above what was needed for home consumption. Now, if in the organization of the industries only those were stressed in which it was desirable and possible to overproduce, industries could be developed which would be available for the fighting forces. I am sure that the making of shoes could be pushed to such an extent that the state hospitals in a particular state could not only make all of the shoes for the insane but could make a considerable over-supply, and I think that it would not, or at least it ought not, be a difficult matter to turn this over-supply into the state for equipping the militia or to the federal government for equipping the federal troops.

I am not sure, of course, that a plan such as I have suggested is the best plan. The important point that I wish to make is

that I believe fully that, with modern methods of machine manufacture, there are enough patients in the institutions of the country who could be trained in manufacturing activities so that the product of their work could be made a very material asset. The industries of the hospitals as a whole, so far as I know, have never been adequately organized. The organization usually is confined to the individual institution. I am satisfied that a broader scheme of organization could be made to produce much larger results.

To the suggestions already made, I might add that the women patients especially could do much sewing and knitting for the military forces. There are innumerable things which the soldiers and sailors need in the way of socks and mufflers and, more important than these, surgical dressings and pajamas, for the hospitals. The Red Cross is collecting enormous amounts of these articles and enrolling large numbers of people into the service of making them, but if we ever get into the war as our allies have been in it for nearly three years, we will need this material in ever-increasing quantities, far beyond anything which has at present been collected. State hospitals that are in the neighborhood of Red Cross branches might, therefore, co-operate to advantage with these branches in training some of their patients in doing that particular work which would be most useful. Even if a particular state hospital is not near a Red Cross branch, it may be near another hospital which is being equipped for military purposes, the management of which would probably be more than glad to have such assistance.

In addition to those already suggested, there is another form of activity which is possible in certain localities. In state hospitals having a large population drawn from farming districts where the cultivation of the soil has been brought to a high degree of efficiency, there are not infrequently many farmers in the immediate neighborhood who, because of the present conditions, the shortage of help, and the conscription, will be unable adequately to gather in their crops. If they do not get help, considerable portions of the crops may be damaged or destroyed. I think it ought to be considered perfectly proper for a neighboring state hospital, if it is possible for it to do so, to co-operate with the farmer in getting in his crops. This would mean simply that the state hospital was helping a particular citizen of the state who was rendering a service of national value, and I think it would be an eminently proper activity.

Finally, the National Committee for Mental Hygiene is undertaking to equip and to provide the personnel of psychiatric units to be attached to the base hospitals of the Army and the Navy so as to insure the proper and humane care of those members of the fighting forces who become mentally ill. In this work the National Committee must necessarily look to the physicians and the nurses of the state hospitals to volunteer for service in these units, because what is needed is the experience which such physicians and nurses have in caring for the mentally ill; other physicians and other nurses do not have this experience and, therefore, are not sufficiently well equipped to deal with the special problems involved. The state hospitals can contribute doctors and nurses to this particularly valuable work. Naturally it will be only the younger men and the younger women, with perhaps some of the younger supervisors, who will volunteer for such service. It is equally important that a sufficient number of physicians and nurses should remain behind, not only to care for the sick but to help to train additional physicians and nurses for this particular duty, so that there may be a constant supply if the demand should increase.

In all probability, with an army of from five hundred thousand to two million men, the number of mentally ill will be too great to be accommodated in the psychiatric units and in the Government Hospital for the Insane at Washington, and therefore presumably an arrangement will have to be made whereby those soldiers and sailors who are affected in such a way as to require hospital care for a considerable time will be sent to a state hospital of the state of which they are resident. The state hospitals will therefore become indirectly a part of the general machinery of caring for the cases of mental illness which arise in the fighting forces. The federal government will undoubtedly undertake to reimburse the hospitals at the per capita cost of maintenance and the hospitals can do their share by so re-arranging their facilities as to accommodate as many as possible of these cases.*

*It is suggested that hospitals desiring to increase rapidly their capacity might erect units such as are used by the army in constructing its hospitals. These are the units which are described in another article in this number, and the standard size accommodates about thirty beds. They are all-wood construction, and could be erected quite rapidly at a cost of $5,000 per unit at the present price of materials and labor in Washington, D. C. With an additional cost of $1,000 per unit for equipment, the total cost would be $200 per bed. Detailed plans and specifications can be obtained from the National Committee for Mental Hygiene.

This, in brief outline, gives some idea of what part the state hospitals may play in the present world conflict. Of course the problems are different in each state and in each institution. Perhaps, for example, some of the hospitals in the Middle West would find it of great advantage to engage in canning industries, preserving the delicious fruits that grow in that territory. In states where there is only one hospital the production might perhaps be greater than the hospital could use, and the question might then arise whether an interchange of produce between states could not be arranged. Many such problems and opportunities will naturally suggest themselves in a little different form to every superintendent, but it seems clear that each hospital can do its bit, and with the spirit which is now animating all of our citizens it is probable that in many instances this bit will turn out to be much.

SOME OF THE NERVOUS AND MENTAL CONDITIONS ARISING IN THE PRESENT WAR

E. MURRAY AUER, M.D.

Formerly of the 23rd General Hospital, B. E. F., France

THROUGH the efforts of the leaders in the study of the human mind, we are coming to realize that the individual reacts no more logically to his environment than his mentality, previous education, and surroundings would warrant. The results of such realization are seen in the modern attitude of society toward the criminal and the mentally incapacitated. In the great European warfare it may be seen behind the battle line in the presence of men versed in neurology and psychiatry, in the provision made in the hospitals for nervous and mental cases, and in the medical boards appointed for the consideration of such individuals as may have failed in their duty through some abnormal mental manifestation.

Malingering or simulation is occasionally seen, but observation soon exposes the individual irritating his nose to produce nosebleed, inducing abscesses, suffering from "fainting fits," "sciatica," "backache," taking picric acid to produce a jaundice or, going even a step further, shooting off the trigger finger or a thumb, or even contracting venereal disease, with the hope of being sent back from the front.

The large number of cases of mental disorders, functional and organic, makes necessary the presence of a physician trained to make thorough studies of and successfully treat mental cases. This requires a patience and skill obtained only through a thorough understanding of the conditions resulting from fatigue, worry, fright, shock, etc. In the organic cases, where foreign bodies, such as shrapnel, have penetrated the nervous tissue, the X-ray has proven an invaluable asset in localization, for not infrequently, due to more extensive involvement resultant from hemorrhage and destruction, the neurologic symptoms do not correspond exactly with the site of the foreign body.

For the more careful consideration of mental cases in the Base Hospitals, huts should be assigned to a Neuro-psychiatric Service, where the functional nervous and mental conditions can receive

proper treatment in the way of complete rest, isolation, dietary measures, and such other treatment as may be required. The cases of organic injury to the nervous system should also be received in a special hut in the surgical division, where the surgeon and the neurologist can more competently care for the wounded and make a more thorough study of the findings.

Coming from his indoor work, the average trooper, physically and morally improved through the out-of-door life and the activity and routine of the camp, undergoes a metamorphosis on the firing line. The fatigue of long marches, exposure, worry over conditions at home, the monotony of trench life, the fear of failing in his duty in a crisis, the morbid anticipation of a charge, of the ground opening beneath him to engulf him, the fear of the "whiz-bang," "torpilles" or aluminum shells that approach noiselessly while the shock of their explosion can be felt through a radius of about fifty yards, the sights of destruction and loss about them, all of these tend to fan any neuropathic predisposition into a flame.

Careful inquiry into the early history of the cases studied met almost invariably with the discovery of earlier neurotic manifestations: impulsiveness, inclination for solitude, avoidance of strange company, reticence, sense of being observed on the street —as one Tommy aptly put it, "the new suit feeling"—fear and timidity in conversation, easy excitability, inclination to jump when on a height, a tendency to blush easily and a feeling of discomfort in feminine company, abnormal sensations over the body, a fear of corners and entries, an uneasiness on crossing a bridge, self-consciousness, St. Vitus' dance, a feeling of hypnotic influence exerted which could not be resisted, fear of being crushed in a crowd, fear in the dark and frequently a sense of being followed at night, in response to which the individual would either hasten his pace or even break into a run, a sense of falling when going to sleep, talking in sleep, nightmares, somnambulism, erotic dreams, nightly emissions, nocturnal enuresis, psychical stricture on passing urine in the presence of others, palpitation of the heart, heart sounds thumping in the ears preventing the individual from going to sleep, and a feeling of incapacity. Physically these individuals were, on the whole, of average masculine type, not infrequently presenting the usual stigmata of degeneration, such as low brow, facial asymmetry, adherent lobules, deviated septum, high palate and the like.

The matter of "the individual equation" in reaction and resistance to outside influences is indeed of interest, inasmuch as many of the cases suffer a common trauma, for example a mine explosion, whereas the results of this common trauma are varied in type and severity.

As in civil life, with the release of mental control, thoughts, fears, desires, repressed to the subconscious, are voiced and the mental condition is often colored by the previous or immediate environment. In one case of acute maniacal excitement the individual frequently mentioned the Iron Cross, Red Cross division, and issued commands. In another mental condition precipitated by the war, the individual at the time I saw him was on his way "to set Lord Kitchener right about the war," traced his heredity from Caesar down through Napoleon, which, together with his being "in rhythmical vibration with the ethereal waves," warranted his assuming a higher military status. Following "burial by mine explosion," or the bursting of a shell in close proximity, many cases are brought in in a stupor with no apparent physical injury or severe psychical trauma, as in the case of a boy of nineteen years, for three days under a heavy fire, who, being threatened by his sergeant with court-martial for sleeping on sentry, was for ten days in a stuporous condition, as was similarly another who had witnessed his chum blown to pieces.

Not infrequently in these cases episodes occurred, when the terrified expression, crouching, starting and staring wildly when spoken to, could not but impress one that the individual was again living through a terrifying experience. One man with profound stupor arose in his bed during the night, recited in a one-sided conversation his entire experience in a charge and burial, and then relapsed into a stuporous state. Tremor and shaking were commonly seen, as in the case of a patient who was buried in a mine explosion on July 19, at Hooge, and again on August 19, at Hill 60. At neither time was he rendered unconscious, but he was badly frightened and his arms and legs shook. On August 19 a mine blew up the trench in which he was stationed and he was partially buried and feared himself killed, but he struggled out of the débris and dashed on into the taken trenches, which were under heavy bombardment for eight hours. In the counter-attack he was badly frightened, his eyes closed, his head and limbs shook and he suffered severe headache.

Disturbances of memory and lapses of consciousness were not uncommon following exhaustion and fright. One soldier, who at the beginning of a bombardment "lost himself," ran from his machine gun up and down the trench until a sharp order from his officer brought him to himself; another stated that at Loos he was carried along in a charge but knew nothing of it; another, at the beginning of a bombardment, dashed from his trench over six traverses and was brought to himself by falling and bumping his head; and lastly, one soldier on regaining consciousness after a shell explosion, found himself walking along a lane. A man, operated on for removal of shrapnel from the knee, on recovering from the anæsthetic, thought himself back in the trenches, talked excitedly of the Germans and guns, moved his cupboard about, thinking it a machine gun, and pointed it at his imaginary enemies. This state lasted three days, when, after a sleep of twelve hours induced by hypnotics, he awakened rational. Another individual, suffering from extreme nervousness following a scalp wound, was lying out-of-doors at the Base Hospital when a storm came up; at the first peal of thunder he dashed to the nearest tree, where he crouched trembling. Shortly afterward he regained himself and returned to the ward.

In the train of the neurotic manifestations, one difficult to combat was insomnia. Many were annoyed by the pounding of the heart sounds in their ears, but the majority simply "could not get to sleep." However, as most of the subjects were young, the insomnia was overshadowed by the occurrence of the horrible trench dreams, night frights, and somnambulistic periods suffered by many of these chaps. One became quite accustomed to seeing patients duck beneath their pillows, rise from their beds weeping and trembling, or shouting loudly, and at times, as in the case mentioned, recounting some horrible experience. The night starts were particularly annoying, as many would awaken with terror, bathed in perspiration but recalling no dreams. Others dreamed of being pursued by Germans with fixed bayonets, of being called to attention or into action and unable to find their clothing or their weapons, of a suffocating feeling across the chest, of losing the trench in the fog and of being unable to get back.

The element of fear or anxiety was relatively uncommon, considering the wealth of fear-producing stimuli, but in the markedly neuropathic individuals one encountered a feeling of incompetence, a fear of doing something wrong and consequently being

shot, a premonition of some impending danger, a fear that something might arise in which he would fail or of going to sleep lest he should not awaken. Again, after a mine explosion or a heavy bombardment, the dread of returning to the trenches and fear of being hit was overweighted and conquered by the fear of loss of confidence or ridicule of their comrades; but nevertheless at the sound of the first shell they would frequently lose control of themselves and, seized by an impulse of self-preservation, would run and crouch, trembling, in the dirt. One chap, denying any fear of being hit, under heavy shelling was possessed with a barely controllable longing to get out of the din, and on sentry duty had the sensation of some one being about and would frequently challenge or be seized with an impulse to run. Occurring in these conditions were hosts of hysterical and neurasthenic manifestations which time will not permit me to do more than mention, such as loss of consciousness, functional nervous spells, severe headaches, abnormal sensations over the body, loss of the motor power of one-half of the body or of one or both limbs, diminution or loss of the sight or hearing, loss or impairment of the power of speech, abnormal sweating, pains in the stomach and about the heart, palpitation, and vomiting spells.

This outline is offered merely as a brief suggestion of the comprehensive possibilities and the necessity for trained neurologists and psychiatrists in the present great war. Depressing as are these manifold conditions, it is with intense pleasure that one sees the usually fortunate outcome of proper care, in their disappearance and the re-establishment of mental equilibrium. Under proper treatment, early instituted (and the first really opportune place is the Base Hospital) these cases make excellent, though sometimes slow progress. Nothing is more difficult to overcome than a well established neurosis. At the Base Hospital one can fairly well employ psychotherapy in the form of absolute quiet, isolation, re-education and persuasion and medicotherapy, hydrotherapy and lumbar puncture when indicated. I cannot insist too strongly upon the value of quiet, rest and isolation as practiced by placing screens, when available, between the cots in the early control of these cases. No little word of praise, either, is due to nurses, who by their careful adherence to instructions, tact and gentle care have fulfilled their noble calling. The re-education serves also as an enlightener to the examiner, as in one of my experiences, when a young Tommy who for several days

had been in a stupor roused at my morning visit and gazing at the insignia on my lapel asked what the "A" meant. When informed that "A" stood for "America" he asked, "Are you an American? I thought all Americans chewed gum and had gold teeth." Reassured, he gazed toward the end of the hut. His eye lighting on the nurse, he asked: "Sister, is she an American too?" "Yes." "Does she sing rag-time?" Removed from the site of trauma, the noise and din, reassured as to their safety, after a complete rest of varied duration, the individual is almost invariably able again to resume his place in civil life, where in time he looks back upon his illness, as he himself not infrequently will say, "as a dream," or sometimes, more fortunately, has no recollection of his experience.

THE PROBLEM OF MENTAL DISEASE IN THE CANADIAN ARMY

CAPT. C. B. FARRAR

Psychiatrist, Military Hospital Commission, Ottawa

OF the total number of soldiers invalided to Canada, the proportion of nervous and mental cases has been fairly constant at 10 per cent, classified as follows:

1. Neurotic reactions, 58 per cent.
2. Mental diseases and defect, 16 per cent.
3. Head injuries, 14 per cent.
4. Epilepsy and epileptoid, 8 per cent.
5. Organic diseases of the central nervous system, 4 per cent.

These figures are compiled from the returns of medical boards which examine the men to determine discharge disability.

Group 1 may be subdivided as follows: (a) Constitutional neurotic temperament. More or less permanent condition aggravated during service, not necessarily at the front. (b) Somatoneuroses. Injuries and illness whether pre-existent or due to service, upon which disproportionate subjective symptoms have been built, and which often long survive the actual physical disability. (c) Specific war-reactions developing in the majority of cases at the front under stress of fighting. Predisposition is of course very often demonstrable in these cases as well. Most typical of these reactions is the so-called "shell-shock," although, to be sure, this condition in common with others of the group is made up of symptoms characteristic of the neuroses in general. From the military records it is not possible to differentiate numerically these various types, but the third subgroup far outnumbers the others.

Group 2 comprises: (a) Psychoses of familiar types, the majority, as would be expected, being dementia praecox. (b) Primary mental defect. (c) Psychopathic inferiority. This condition, easily unrecognized in routine medical boards, has been the cause of many obvious difficulties. The class includes many of the inefficient and undesirable soldiers, whose history often shows that they have made good neither in civil nor military life. They are usually the trouble makers in the convalescent homes and furnish a considerable number of the men with grievances con-

cerning pension claims and treatment of the returned soldier in general.

Group 3 is made up mostly of cases of gunshot or shell wounds of the head, with loss of bone. Strictly considered, the majority of these cases might be omitted from the categories of nervous and mental diseases. It is very rare for a head case of this sort to present symptoms of neurosis or psychosis. Variable headache and dizziness are the only fairly constant symptoms.

In Group 4 the percentage of genuine epilepsy is not determinable from available records. Some of the cases with epileptiform convulsions turn out to be initial paresis, or dementia praecox, or a neurosis.

Group 5, the smallest of all, is made up chiefly of paresis and tabes, with rare diagnoses of brain tumor, multiple sclerosis, etc.

The program of differentiation and group treatment of nervous and mental conditions among returned soldiers in Canada includes:

1. A reception hospital for war neuroses and similar conditions, observation of doubtful states, etc. These cases are received at the Ontario Military Hospital at Cobourg.

2. An institution for the severe and chronic types of mental disease. Hitherto these cases have as a rule been sent to the provincial hospitals in their respective districts.

3. The establishment of an institution or colony for epileptics is under consideration.

4. The establishment of a center for the observation and treatment of syphilitic conditions is also contemplated. In most of the cases of paresis and tabes there is a pre-enlistment history of infection, but the evidence on the records points as a rule to the development of the disabling symptoms during service. The question of pensionability in many cases offers considerable difficulty. The importance of attention to syphilitic history and serological and neurological evidence of syphilis at examination of recruits is very obvious.

Hitherto where syphilitic treatment has been indicated in continuation of that begun overseas, this has as a rule been done in active treatment hospitals, while the later cases, such as paresis, have found their way to the provincial hospitals. An initial segregation of all syphilitic cases among returned men at a center where all the indications of observation, classification and treatment could be met is believed to be desirable.

5. Convalescent homes. These were the first institutions established in Canada for the reception of disabled soldiers and accommodate all types of convalescents. While there is but one special institution of each type above referred to, the convalescent homes are scattered throughout the Dominion and to them cases are transferred when treatment has reached a late stage and especially if it is desirable that an invalid should be in an institution in his home district.

The war reactions outnumber probably all other types of nervous disability combined and demand proportionate attention in management and treatment. At the special institution at Cobourg the following points are kept in mind:

(a) The maintenance of military discipline and individualized control is found to be of indispensable and first-rate importance in dealing with these cases.

(b) Hydro- and electro-therapeutic treatment is of considerable service in many cases.

(c) Occupation-therapy with suitable variety of work is of almost universal importance.

Treatment of a highly specialized sort has been developed under the auspices of the psychological department of Toronto University, following the plan of motor training applied by Dr. Franz at the Government Hospital in Washington. This method is found useful in certain cases of functional paralysis, incoordination, affect-inhibitions, tremors, and other kinetic disorders.

In the general policy of caring for the war neuroses it has been demonstrated over and over again, that patients while under treatment should be shifted as little as possible from one institution to another. It is also as a rule not well to have the patient in the vicinity of his home, and home visits are certainly contra-indicated in the severer neuroses. The conscious will and purpose to get well are often difficult to establish and all opposing factors must be kept in mind.

SOME EXPERIENCES IN THE GERMAN RED CROSS

CLARENCE A. NEYMANN, M.D.

Instructor in Psychiatry, the Johns Hopkins University, Baltimore, Maryland

IN the spring of 1914, after a five years' residence in Germany, I passed my state examinations in Heidelberg, and had just entered the department of hygiene with the intention of doing some serological work when the war began. In the general excitement that preceded the outbreak of hostilities I was prevailed upon to join the Red Cross and remained with that organization until the end of April, 1915.

Having only my memory to rely on, it is with some hesitation that I give my impressions of this nine months' service. Although changes in the medical organization must have been made since I left Germany over two years ago, I believe, however, that the basis for the final organization had been fixed before I left and that such changes as have occurred are of minor importance.

At the outbreak of the war the military hospital service was divided into dressing stations, field hospitals, base hospitals and evacuation hospitals. The dressing stations were situated behind the firing line, but within artillery range. The field hospitals were out of range of all but the heaviest artillery and were movable. The base hospitals were far inland, entirely removed from the scene of action, and the evacuation hospitals were in the vicinity of the base hospitals. The evacuation hospitals were really mere homes for convalescents, usually presided over by an elderly physician of the town or village in which they were situated and supervised by the nearest base hospital. This was the sum total of provision made for the sick and the wounded at the outbreak of the war. There were insufficient facilities for returning the men from the front, most of the wounded arriving at the base hospitals in cattle cars on straw bedding with wounds exposed and fractures often without splints.

Germany was sure of a victory within three months and as a consequence no provision had been made for specialized treatment of any kind. The situation in Heidelberg, where I was stationed, as in other university towns, was a little better than elsewhere because of the university clinics already in existence, and these

clinics, having become base hospitals, naturally co-operated in exchanging their sick and wounded.

During the first part of the war, that is, up to the time of the battle of the Marne, we did not see a single mental case in our hospital, the "Vereinslazaret Stadthalle," a base hospital of 280 beds with a very active service. The psychiatric clinic in Heidelberg was half filled with ordinary wounded and there seemed to be no need for a psychiatrist anywhere. This, I believe, was due partly to the attitude of the troops, who were buoyantly sure of speedy victory, and partly to the fact that, owing to the general unsatisfactory conditions as outlined above, no attention was paid to individuals who behaved queerly. Thus psychoneuroses hardly existed and patients suffering from deeper-seated mental disorders were swept along by the multitude.

In November, with the definite departure from open to trench warfare, the picture changed. Hardly a transport of sick and wounded, and these transports arrived twice a week, did not contain its quota of mental cases. The psychiatric clinic was used only for patients with more serious mental afflictions, far from being a mere adjunct it had become so overcrowded that the psychoneurotics had to be treated in the base hospitals. Now, these psychoneurotics slowly but surely began to be a nuisance in the base hospitals that did not have a psychiatrist attached to them by accident. They were "uninteresting cases" to the men of preeminently surgical training and were sent to the evacuation hospitals, stagnated there, and finally returned to the front. At the front all their former symptoms returned immediately and they were sent back to the base hospitals. One case that I know of went through this procedure three times.

Finally the government took the matter in hand and provided each base hospital with a psychiatrist or arranged for the regular visit of a psychiatrist from a psychiatric clinic, provided one was near at hand as was the case in Heidelberg. It was the duty of this visiting psychiatrist to discuss each case with the ward doctor and to arrange for suitable treatment. The psychiatrist also dealt with the cases of plain slackers and decided what was to be done with this type. Besides this the government sent a proclamation to all base hospitals, warning against returning psychoneurotic patients to the front as *felddienstfähig*, capable of service in the field, in a haphazard way. With these steps, conditions immediately became better. Patients were kept in

the base hospitals until improved, then sent home for a rest and finally assigned to garrison duty, *garnisonsdienstfähig*, near their home towns. The plain slackers were assigned to heavy labor away from home, while cases of dementia praecox, general paresis, etc., were declared unfit for duty, *dienstunbrauchbar*, and concentrated in the regular state institutions. They were, however, treated as soldiers and enjoyed especial privileges whenever possible.

As to the types of cases encountered, I can speak only of those seen in the base hospitals, all of which were psychoneurotics in the true sense of the word. It was for the interest of all concerned to remove severer affections to the psychiatric clinics as soon as possible, even if they were severely wounded. This was done in part directly from the field hospitals and was the only classification these hospitals attempted, all other sorting out being done by the base hospitals where there was time for a more thorough examination.

One type of psychoneurosis stood out before all others and was of course immediately labeled. It was called *Granatfieber*, grenade fever. These individuals, at least those that came under my observation, were usually stoop-shouldered, and narrow-chested. They had a poor physical build and a naturally weak constitution. All complained of indigestion (the hospital served good, though rather coarse food), backaches and headaches. However, they fell in with the routine pretty well and only showed symptoms when the experiences at the front were dwelt upon. Then, especially when grenades were mentioned, they immediately grew pale, trembled, and in some cases so far lost control of their legs that they fell down. After such an experience they were restless and nervous and could not sleep without hypnotics for a number of days. This reaction was not necessarily dependent upon the question of their return to the front, but could be brought about by a mere casual mention of explosions, grenades, shells, mines, etc. Unfortunately no association tests were done.

A second class that was fairly distinct consisted of those individuals who had had especially trying experiences and then simulated some internal or mental disorder for which men in their company had been sent to the rear. This simulation often persisted for months even after they were told that they were unfit for duty in the field. Thus, one of my patients had attacks of pseudo-epilepsy, so manifestly genuine that the reacting pupils

during the attack and the account of his company commander was the only thing that clinched the diagnosis. He had been struck between the shoulders by a mine which did not explode. This happened a few days after a man in his company was sent to the rear on account of repeated epileptic attacks.

From this to mere slackerdom is but a step and one sees all intermediate stages. It is hardly to be wondered at, that a man who naturally has not much strength of character grows tired after months of trench life and quits, either by purposely exposing himself to the fire of the enemy, or by simulating some disorder. All such individuals were considered unfit for duty at the front. They lower the morale of their entire companies.

Quite opposite from the reaction of the naturally weak and neurotic is that of the mentally slightly deficient. The troops from Bavaria are notably brave, yet among their wounded one finds many high-grade morons. These individuals, who are wandering laborers, never settle down or get married, spend their money as they earn it, believe in the direct intervention in their behalf of certain sacred statues, that is, have an extremely low conception of religion, can just read and write, and if opportunity is offered will commit petty theft, have not proven bad soldiers.

One such individual came on my ward as unmanageable. His elbow was badly shattered and he was the proud possessor of the iron cross, quite a tribute for a private in those days. He refused medical attention, saying we were mere civilians and had no right to fuss with him or to give him orders. He scolded about the food and made himself a perfect pest by upsetting all the psychoneurotics with weird accounts of the front. He could just read and write and stole everything in sight. With all this he had been an excellent soldier. His main fear was that of not being able to return to the front on account of his stiff elbow joint. This was one of a large number of such individuals that came under my direct observation. Needless to say no especial attention was paid to their mental status; they were treated like ordinary soldiers.

These were the four main types that I encountered. Of course, there were all sorts of individual reactions. Those patients who had gone through depressions in previous years again became depressed. Hypomanic individuals became very wild and lost almost the last remnants of civilization. Such persons were most difficult to control in the first few weeks after their return

from the front, unless they were so seriously wounded that they were confined to their beds. They were constantly exceeding the time limit of their leave, getting drunk and making other kinds of disturbance. After a rest in the hospital for a period of time they usually calmed down again and became manageable. All these facts agree with our modern psychiatric view of the specific reaction of each individual.

THE EFFECTS OF HIGH EXPLOSIVES UPON THE CENTRAL NERVOUS SYSTEM

A Review of Mott's Lettsomian Lectures, 1916, and G. Elliot Smith's "Shell-Shock and Its Lessons"

E. E. SOUTHARD, M. D.
Director, Psychopathic Hospital, Boston

MOTT'S Lettsomian Lectures, delivered before the Medical Society of London in February and March, 1916, contain much of interest. Mott is now a temporary major in the R. A. M. C. and has been in contact with cases at the Fourth London General Hospital.

So terrible is modern trench warfare that "a neuro-potentially sound soldier in this trench warfare may, from the stress of prolonged active service, acquire a neurasthenic condition." Aside from these acquired cases, "if in a soldier there is an inborn timidity or neurotic disposition, or an inborn germinal or acquired neuropathic or psychopathic taint, causing a *locus minoris resistentiae* in the central nervous system, it necessarily follows that he will be less able to withstand the terrifying effects of shell fire and the stress of trench warfare."

There are three effects of high explosives upon the central nervous system. First, instant fatalities from violence or burial (instant death has occurred in groups of men from shell fire, also, without visible injury); secondly, non-fatal wounds and injuries of the body, including the central nervous system (a large number of these cases never show the so-called shell-shock); and thirdly, injuries of the central nervous system without visible injury.

Mott includes the functional neuroses and psychoses in this last group despite the non-existence of discoverable lesions, proceeding on the familiar argument that these psychic traumata "must imply a physical or chemical change and a break in the links of the chain of neurones which subserve a particular function." Even such a symptom as mutism, a symptom as suddenly lost as it is acquired, is grouped here by Mott.

The causes of shock to the nervous system are these:

a. Cerebral concussion by direct aerial compression;

b. Indirectly from aerial compression by blowing the subject into the air or against the side of the trench or dugout;

c. By blowing down of parapet or roof or by blow by sandbag;
d. Burial and partial asphyxiation;
e. Carbon monoxid poisoning, CO generated by high explosives.

All these conditions might readily produce structural diseases of the nervous system without visible external injury.

Mott quoted Lord Sydenham, that the forces generated in shell explosions are sufficient to cause instantaneous death. Since the cerebrospinal fluid is incompressible, the enormous aerial compression generated in the detonation of high explosives, may, according to Mott, "be transmitted to the fluid about the base of the brain and cause shock to the vital centres of the floor of the fourth ventricle, causing instantaneous arrest of the functions of the cardiac and respiratory centres."

There is an alternative explanation to the effect that sudden atmospheric depression occasioned by shell explosion might liberate air suspended in the blood, transforming it into bubbles of gas which would be driven into the capillary vessels and cause instant death. Mott, however, believes that the death without visible injury following aerial concussion is due to the sudden arrest of bulbar centres.

Mott reviews the neurone doctrine, laying great stress upon the von Monakow theory of diaschisis, summarizing briefly his own work upon the dark field appearances of nerve cells, and concluding that severe concussion "can not only cause immediate dissociation of the cortical perceptor neurones, producing unconsciousness or a disturbance of consciousness, but for a varying period of time it can destroy the power of recollection of perceptions prior to the shock." Mott attributes this loss of recollection to "dissociation of the higher association systems of (pyramidal) neurones, which form a sheath of cells of three layers, covering the whole cortex cerebri." In a case of complete loss of consciousness, there is a complete dissociation of all the afferent projection fibres of subcortical neurones from the perceptor systems. Since much depends upon the oxygen tension of the fluid, "a violent emotion such as fright can, by its influence upon the vasomotor centre and the heart's action, causing a fall in the blood pressure, produce an important lowering of the oxygen tension in the fluid, and therefore a suspension of function of the intercalary neurones of the cortex, followed by dissociation of the cortical perceptors and loss of consciousness." Cortical blindness, deafness, mutism, paralysis, are, briefly stated, symptoms of cortical dissociation. The

headache, weariness, loss of power of concentration, irresolution, and mental fatigue, are interpreted as due to an inability to renew nervous energy automatically as fast as it is used.

With respect to the instantaneous death of groups of men in the so-called "valleys of death," Mott quotes theories of M. Arnoux and of Surgeon General Stevenson. Leonard Hill is quoted to the following effect: "Explosion of a big shell in a trench, dugout, cellar, or other confined space, must, I think, instantly deoxygenate the air and produce a high concentration of nitrogen. The inspirations of a man at the time of explosion may introduce enough of these gases to cause death from want of oxygen. If he is fatigued, his muscles will be in the condition to go into rigor on the sudden deprival of oxygen."

Mott's second lecture deals with carbon monoxid poisoning, calling attention to the characteristic loss of memory therein. He calls attention to the identity in appearances in the brains of certain workers poisoned in industrial life (in carbonyl of nickel works), and men killed in shell-shock. Photographs are presented demonstrating this identity, and in particular the capillary punctate hemorrhages of the corpus callosum in the industrial and military cases. The shell-shock brains have been sent on for examination from the mobile laboratories or the casualty clearing stations. Photographs are presented of cell changes, also due to carbon monoxid poisoning.

The signs and symptoms of shell-shock "are various, and with the exception of the prolonged effect on consciousness and memory in severe cases, accord in the main to those of the two common types of functional neuroses: hysteria and neurasthenia."

A large majority of shell-shock cases occur in persons with a nervous temperament, or persons who were the victims of acquired or inherited neuropathy. In some of the acquired cases, the shell-shock effect occurs only after a third or fourth experience and after a continued spell of stress and anxiety. General paresis may be brought on by the *commotio cerebri*.

Persons developing epilepsy as a result of shell-shock are nearly always persons who have previously suffered from true epilepsy or epileptoid phenomena, or persons with a history of epilepsy or insanity in the family. A medical research committee has been at work especially on this matter from the standpoint of allotting compensation. According to Mott, epilepsy is "of all nervous diseases the one in which an inborn tendency is shown more than in

any other nervous affection," and he believes that shell-shock is not *per se* the cause of epilepsy in the majority of cases. Out of 156 cases with a previous history, 52 epileptics gave a history of previous nervous breakdown or a timid disposition. In fact, "an acquired or inborn tendency to neurosis plays an important part in the effects on the central nervous system in exposure to shell-shock in the majority of cases." It appears that from the point of view of compensation or pension, the War Office authorities regard shell-shock as a definite injury although there may be no visible sign of it. We have to face the fact that "the notion of never recovering may become a fixed idea," just as in liability cases in the industrial field.

There are cases of automatic wandering and temporary mental confusion which belong in this group. Peculiar cases of limited amnesia are cited, particularly cases of alteration of musical memory. The effects of terrifying dreams are described, especially their relation to fear.

The most frequent speech defect is mutism, about one in twenty of the shell-shock cases suffering therewith. Most of these cases are able to write out a lucid account of their experiences. On account of the sudden and varied manner in which the mutes recover their power of speech and intonation, Mott believes the mutism is due to a refractory condition of the voluntary cortical mechanism of phonation.

An analysis of the terrifying dreams of the soldiers shows that their fear is, to use Mott's phrase, "contemplative," and that the fear is through imagination continually operating, consciously and unconsciously. Mott believes it is this terror in continual operation which induces the refractory phase in the structures controlling phonation. Attention gets centred consciously and subconsciously on the "fixed idea" of the paralysis of phonation.

The commonest headache is occipital and nuchal, being often described as a helmet-like compression (the "helmet of Minerva"). The headaches may attend the efforts of a mute man to speak or a deaf man to listen. There is a variety of cortical, vasomotor, and sensory disturbances. Functional deafness and functional deafmutism occur, and in the latter event, either speech or hearing may return first.

In the acute stage of shell-shock, the victim is rather apt to complain of smoky vision, and there may be also failure of accommodation and sluggish light reflexes. There are some cases of

functional blindness. Defensive tics and pantomime movements in sleep (as if to ward off a blow) are described. Tremors constitute a serious disability. A case of severe functional tremor completely cured by suggestion is given. Paraplegia, as also hemiplegia and monoplegia, occur in shell-shock cases. The fixed idea of the paralysis has been often suggested to the patient by what happened to him at the time of the shock. Mott is instituting a museum of crutches, sticks, and other supports of patients admitted from hospitals where they had been many weeks and months, only waiting to be assured that there was nothing the matter with them. "Be cheerful and look cheerful is the note which should ever be sounded to these functional cases. Sympathy should not be misplaced although it should be shown to all these poor fellows who have a fixed idea of never recovering. . . . I do not find hypnosis or psychanalysis necessary or even desirable. . . . The conditions at the Maudsley Hospital will be all that can be desired. There are light, airy wards, and dayrooms for meals and recreations, plenty of single rooms for the isolation of cases that are troubled by noises or require separate attention; and especially valuable are the baths, so that every soldier can get a warm spray bath every day. The warm baths, and especially the continuous warm baths, of which there are eight, are especially valuable."

Mott also stresses diversion with books, games, and music.

An interesting foil to Mott's Lettsomian Lectures is the Manchester University publication entitled "Shell-Shock and Its Lessons." * The authors are a physician and a psychologist. The physician, G. Elliot Smith, is the eminent Dean of the Manchester University Faculty of Medicine and an authority on embryology of the brain and the anthropology of the Egyptians; the psychologist is T. H. Pear. The book is dedicated to Major R. G. Rows, whose point of view with respect to the treatment of shell-shock is commended. The greater part of the book is devoted to general considerations supporting the functional point of view in the treatment of the psychoneuroses. "Precisely in those cases of psychoneuroses which yield to psychic treatment, there is no anatomical, pathological or chemical evidence of inheritance. . . . While the contributions of anatomy, physiology and pathology to the treatment of psychoneuroses have

*Smith, G. Elliot, and Pear, T. H., "Shell-Shock and its Lessons," Manchester University Press, and London and New York, Longmans, Green & Co., 1917; 135 pages.

not yet gone beyond theoretical and mutually conflicting suggestions, the psychological method of investigation and treatment, on the other hand, has proved itself of practical use to returning patients to the normal state of health. . . . The psychoneurosis is often simply a progressive state of mal-adaptation to environment—a mental twist which can be corrected if treated suitably at a sufficiently early age.

"While it is indisputable that the psychoneuroses, like all mental phenomena, have a material basis . . . to sit with folded hands and wait for the advancement of our knowledge of anatomy, physiology and bio-chemistry would be fatuous, when there are other and more direct means of treating the numerous and often pathetic cases which urgently call for cure."

The inadequacy of the term "shell-shock" is acknowledged but the term seems to have taken hold as against the more satisfactory, but less widely employed term, "war strain."

We must look in the emotional sphere rather than the intellectual sphere for the explanation of these conditions, characterized by instability and exaggeration of emotion.

The method of visiting patients in the wards, adequate as it is for the care of physical injuries, is insufficient for mental cases. Shell-shock can occur in a person in perfect physical and mental condition. How long he stays in the trenches depends upon himself, namely, upon his temperament, disposition and character.

Loss of sleep is followed by pains, unpleasant organic sensations, hyperaesthesia, irritability, emotional instability, inability to fix attention, loss of self-control. The absence of external manifestations proves nothing. Fear and other emotions are suppressed. The suppression of emotion is exhausting. In modern warfare the soldier cannot always give vent to pent-up emotion by charging the enemy. Finally collapse occurs when a shell bursts in the air, even though there be no actual contact with missiles, earth or gases. Loss of consciousness is common, and upon recovery there are often very severe immediate disorders of sensation, emotion, intellect and will.

Then follows an enumeration of the now well-known phenomena of shell-shock, blindness, deafness, dumbness, contractures and subjective disorders. The strangely dramatic cures of these cases were among the most startling phenomena of the war. Two functionally mute patients were cured upon hearing that Rumania had entered the war. Another was cured by a view

of Charlie Chaplin. However, many cases are not so simply cured, and the greater part of this book is devoted to the lessons drawn from the necessity in many cases of more elaborate treatment, especially treatment by psychological analysis and re-education.

Many quotations are made from the work of Déjerine and Gauckler (The Psychoneuroses etc., translated by Jelliffe). Gaupp is quoted to this effect: "There is no justification for calling every instance [of war hysteria] a case of malingering or simulation. There are quite capable men of irreproachable character whose nervous system is positively unfit for the hardships and horrors of war." Some of these, it is said, take refuge in disease.

As to treatment, the necessity of early measures is stressed. As to firmness and sympathy, even were these milder psychoses to be regarded as varieties of simulation, still the method of firmness is hardly calculated to meet malingering. However, mere sympathy of the "cheer up" or "forget it" variety is not to the point.

Isolation may work in some cases, but isolation even accompanied by rest and over feeding is never enough. In any event, the situation with soldiers is quite different from that of civilians. The value of suggestion and hypnosis is unquestioned. C. S. Myers has relieved acute symptoms in recent cases of shell-shock by hypnosis. In general, however, the results of hypnotic treatment may be described as brilliant but erratic. The same may be said of electricity as a treatment for the vocal cords in hysteric aphonia. There is a certain value to work. This must be prescribed as a sequel to (not as a substitute for) the performance of work by the doctor. There is, however, an individual and personal essence to any particular example of shell-shock.

Just as butchery is not anatomy, so the ordinary methods of psychological analysis by alienists are not the true methods. To say that a man is suffering from a delusion of persecution or a fear of open spaces is merely a carving-up of his mind. What we must rather get at is the interpenetration of these beliefs with the rest of his mental life. The history of the delusions is in point. Moreover, psychological analysis is not the mechanical kind of thing suggested by anatomy; chemical analysis is a better analogue.

Jung's view of a neurosis as a failure of adaptation is favorably quoted. It is not necessary to subscribe to any one doctrine of

psycho analysis. The term "analysis" should hardly be applied to the theories that underlie and determine the process of re-education. Perhaps the term should be reserved for the diagnostic method rather than for any given theory supposed to underlie the process. "The ultimate lines on which an ideal diagnostic analysis and curative re-education will be possible are yet undefined."

Chapters IV and V are devoted to general considerations and lessons. The British attitude to psychiatry is severely arraigned. "The community treats the sufferer well when, but *not before*, he has become a 'lunatic.' That is the British procedure today."

American work upon the borderline cases, as at the Psychopathic Hospital in Boston, is cited somewhat at length.

It appears that the Medico-Psychological Association of Great Britain and Ireland had issued an elaborate report on this matter by a committee appointed in November, 1911. Then the war stepped in and made the problem even more disturbing. "If the lessons of the war are to be truly beneficial, much more extensive application must be made of these methods (the institutions for borderline cases) not only for our soldiers now, but also for our civilian population for all time."

Abraham Flexner's report on medical application in Europe is quoted. It seemed that precisely what the English and French medical education have to their credit, namely, an extraordinary practicality, is completely left out of the teaching of British psychiatry. Flexner showed that German education in its clinical instruction was overwhelmingly demonstrative; that is, students *saw* and *heard* but almost never *did*. How strange it is that German psychiatry should be so much more practical a matter than the psychiatry of England, which in general, is the home of practicality.

"The most depressing aspect of the present state of affairs is the comparative absence of all research."

The chief functions of a psychiatric clinic for early and incipient mental disorder staffed by skilled specialists are:

(1) Attendance on the mentally sick;

(2) The provision of opportunities for personal intercourse between patients and the psychiatrists in training;

(3) The theoretical and practical instruction of students;

(4) Advising general practitioners and others who are faced with difficult problems arising in their daily work;

(5) To serve as a connecting link between investigation in the large asylums and that in the anatomical, pathological, bacteriological, biochemical, psychological and other laboratories of the universities;

(6) The scientific investigation of the mental and bodily factors concerned in mental disease;

(7) The furtherance of international exchange of scientific knowledge concerning mental disorder, by the welcome accorded to visitors from other countries;

(8) The dissemination of medical views on certain important social questions and the correction of existing prejudices concerning insanity;

(9) When necessary, the after-care of the discharged patient.

The Henry Phipps Clinic in Baltimore, and the Munich and Giessen Clinics in Germany are mentioned. The one good step in England in this direction is the establishment of the Henry Maudsley Mental Hospital. In 1849, a visiting committee of Hanwell Asylum suggested reform "but the dust lies thick upon this volume published a long time before the Crimean, not the present, war."

MENTAL DISEASE, SUICIDES AND HOMICIDES IN THE UNITED STATES ARMY AND NAVY, 1897–1915

Prepared from the Annual Reports of the Surgeons General

EDITH M. FURBUSH, A.B., B.S.

Statistician of The National Committee for Mental Hygiene

Table I

Rates per 1,000 of insanity admissions, enlisted men, United States Army, 1897 to 1915, inclusive

Year	For average total enlisted men	For enlisted men in U. S. proper (exclusive of Alaska)	For enlisted men in Philippines (not natives)
1897	....	.83	....
1898	1.08	1.24	2.07
1899	1.78	1.72	2.97
1900	2.72	1.30	2.79
1901	1.79	1.28	2.04
1902	1.71	1.26	2.47
1903	1.06	1.02	1.05
1904	1.69	1.71	1.75
1905	1.62	1.61	1.45
1906	1.49	1.33	2.02
1907	1.88	1.79	1.88
1908	1.50	1.58	1.09
1909	1.61	1.63	1.56
1910	1.59	1.58	1.87
1911	1.73	1.68	2.01
1912*	3.45	3.26	3.56
1913*	3.44	2.92	4.83
1914*	4.18	3.83	6.24
1915*	3.82	3.04	7.27

* "Mental Alienation" includes several conditions not included under the term insanity used previously, such as defective mental development, constitutional psychopathic state, hypochondriasis, and nostalgia.

Table II

Suicides and homicides, enlisted men, United States Army, 1897 to 1915, inclusive

Year	Mean enlisted strength	Suicides		Homicides	
		Number	Rate per 1,000	Number	Rate per 1,000
1897	27,374	10	.37	..	....
1898	147,795	38	.26	19	.13
1899	105,546	30	.28	23	.22
1900	100,389	42	.42	28	.28
1901	92,491	..	....	..	....
1902	*80,778	..	....	..	....
1903	†67,643	34	.50	9	.13
1904	60,139	27	.45	10	.17
1905	58,556	31	.53	20	.34
1906	58,572	39	.67	9	.15
1907	54,949	26	.47	17	.31
1908	67,515	39	.58	22	.33
1909	75,399	33	.44	15	.20
1910	71,814	31	.43	16	.22
1911	73,023	46	.63	18	.25
1912	79,613	54	.68	20	.25
1913	81,697	42	.51	17	.21
1914	88,133	44	.50	25	.28
1915	94,729	50	.53	21	.22

* Includes 4,826 native Filipinos.
† Includes 4,789 native Filipinos.

Table III

Comparison of admissions for insanity and epilepsy, enlisted men, United States Army, 1903 to 1915, inclusive

Year	Insanity		Epilepsy	
	Number	Rate per 1,000	Number	Rate per 1,000
1903	72	1.06	83	1.23
1904	99	1.69	128	2.18
1905	92	1.62	133	2.34
1906	84	1.49	112	1.98
1907	101	1.88	122	2.27
1908	98	1.50	159	2.43
1909	120	1.61	129	1.74
1910	114	1.59	115	1.61
1911	126	1.73	126	1.73
1912	*270	3.45	91	1.16
1913	*278	3.44	116	1.44
1914	*365	4.18	108	1.24
1915	*358	3.82	114	1.22

* "Mental Alienation." See note, Table I.

Table IV

Suicides, homicides, and admissions for mental alienation and epilepsy, enlisted men, American Army, 1912 to 1915, inclusive

Year	Mean enlisted strength		Mental alienation		Epilepsy		Suicides		Homicides	
	Adjutant General's report	Surgeon General's report	Number	Rate per 1,000	Number	Rate per 1,000	Number	Rate per 1,000	Number	Rate per 1,000
1912.....	79,613	78,267	270	3.45	91	1.16	54	.68	20	.25
1913.....	81,697	80,766	278	3.44	116	1.44	42	.51	17	.21
1914.....	88,133	87,228	365	4.18	108	1.24	44	.50	25	.28
1915.....	94,729	93,262	358	3.82	114	1.22	50	.53	21	.22

Rates for mental alienation and epilepsy are computed upon the average enlisted strength as shown by the Surgeon General's reports, while rates for suicides and homicides are based upon the strength according to the reports of the Adjutant General.

Table V

Insanity admissions, suicides and homicides, Navy and Marines, 1909 to 1915, inclusive

Year	Mean enlisted strength	*Insanity		Suicides		Homicides	
		Number	Rate per 1,000	Number	Rate per 1,000	Number	Rate per 1,000
1909.....	57,172	145	2.61	17	.30	..	...
1910.....	58,340	186	3.16	20	.34	7	.12
1911.....	61,399	214	3.48	22	.35	..	...
1912.....	61,897	201	3.39	16	.25	7	.11
1913.....	65,926	285	4.32	14	.21	5	.08
1914.....	67,141	276	4.11	21	.31	4	.06
1915.....	68,075	190	2.79	21	.30	1	.01

* Rates for insanity admissions are computed upon average strength as shown by returns from medical department.

NEURO-PSYCHIATRY AND THE WAR

A Bibliography with Abstracts

Prepared by

Mabel W. Brown, A.B.

Librarian, The National Committee for Mental Hygiene

Edited by

Frankwood E. Williams, M.D.

Associate Medical Director, The National Committee for Mental Hygiene

In order that the psychiatrists and neurologists who are now taking their places in the neuro-psychiatric hospital units that are to be attached to the base and other military hospitals of the United States Government may have at hand the latest information as to the special problems to be met in the army camps, abstracts of articles dealing with the psychiatric aspects of the war are being gathered or prepared as rapidly as possible. In the preparation of these abstracts the English, Canadian, French, Italian, Russian, Australian and German journals, in so far as the latter are available, are being consulted. It is possible to present in this number of Mental Hygiene but a small portion of the abstracts already prepared. It is hoped that it will be possible to publish the additional abstracts and those that will be prepared from time to time as supplements of Mental Hygiene. These supplements will be furnished to the officers in the field and to others who may be interested.

Astwatsaturow, M. I. Mental Diseases in Regard to the Conditions of Military Service; Statistical Data of Mental Disease in Various Armies. Wojenno-Medicinski j., Sept. 1912

An able discussion of the statistics of the subject by the noted Warsaw psychiatrist. He admits that garrison and field service have the elements to favor the development of mental disease, especially in those hereditarily predisposed, but he also points out that on the other hand the regulated life in the army will prove to others a boon as regards their general health. Professor Astwatsaturow rejects all relative statistical data with reference to the civil population, because in the army all cases, even those of a mild or borderland character, are at once recorded, while in civil life none but the frankly pronounced cases become a matter of record. On the other hand, it must be considered that in the army we have to deal with a class of young men especially selected for their health and development, while the civil communities contain all sorts of defectives. In studying the statistical data of practically all European armies, Aswatsaturow compares the favorable result of compulsory service as against voluntary service by citing France. Here the figures speak in strong terms and tell us that when the army has ceased to become a refuge for those unable to cope with the struggle for existence in civil life, the condition of the troops from a neuro-pathologic standpoint improves wonderfully. To this day the colonial troops in Africa show twice as many ineffectives as the French army at home. As regards the influence of war, the author cites the Spanish-American war for the American army. The difficulties of a campaign are directly responsible for increased admission of mental diseases. The same could be observed in the German army before, during and after the war with France, though the increased admission rate was not quite as pronounced as with the American forces. While limiting the present article to the statistical side of the problem, it is apparent from a casual remark that the author favors short terms of enlistment.—Mil. surg. 33: 467, Nov. 1913.

Auer, E. Murray. Phenomena Resultant upon Fatigue and Shock of the Central Nervous System Observed at the Front in France. Med. rec. 89: 641–44, April 8, 1916

"The manifestations of disordered function of the central nervous system resultant upon fatigue and shock occurring in the present war are of uncommon interest, having as they do for their etiology a more or less common factor, i. e., 'a mine explosion' producing its varying effects upon the number involved, and because of their great variety, illustrate strongly the matter of 'the individual equation' in reaction and resistance to outside influences.

"The functional nervous and mental disorders studied included those resulting from the general fatigue of duty and long marches, exposure, loss of sleep, terror, and 'shock,' which latter cases depended upon the activity along the firing line such as 'mine explosions,' charges, and shell explosions in the immediate vicinity of the individual without causing any apparent physical trauma.

"The symptomatology occurring as a result of these traumatic influences included disordered activity of the psychic, special sense, sensory and motor elements, invariably in combination with one phenomenon of disordered function accentuated."

Among mental and nervous states resulting from severe shock have been the following: hyper- and hypo-mental activity, characterized by increased motor and psychical activity such as playfulness, grimacing, flight of ideas, distractibility and rhyming of an acute mania; stupors, muscular rigidity, active deep reflexes, apathy and indifference; tremor and shaking; disturbances of memory ranging from simple forgetfulness to lapse of unconsciousness; dementia praecox precipitated by existing conditions of stress; inability to sleep and horrible trench dreams; neurasthenia; psychical pains; disturbance of organic functioning; vasomotor disturbances; abnormal sensations of all kinds and dyesthesia; loss of motor power, both of gradual and acute onset according to the nature of the shock; impairment of vision, resulting from prolonged fatigue or sudden shock; auditory disturbances of a hyper- or hypo-sensitive nature; hesitancy and loss of speech, and various kinds of tics.

Inquiry into the early history of the cases studied resulted, without exception, in the discovery of earlier neurotic manifestations. Physical examination showed nothing unusual other than stigmata of degeneration. Treatment consisted in isolation and absolute rest, with corrective measures and psychotherapy.

Auer, Max. Statistics and Symptomatology of the Mental Disturbances Occurring in the Navy, Especially Catatonia, Pathological Intoxication, Imbecility, and their Legal Determination. Archiv für Psychiatrie und Nervenkrankheiten 49: 265–316, Dec. 1911

This article serves to illustrate what is being done in special psychiatrical work in the German navy. Various cases are quoted, expert opinions given, and conclusions drawn. The paper is of local rather than general interest, but as an example of painstaking psychiatric work among a special class, it is of distinct general value.—E. W. Taylor in J. of Nervous and Mental Disease 39: 494, July 1912.

Beaton, Thomas. Some Observations on Mental Conditions as Observed Amongst the Ship's Company of a Battleship in War Time. J. of Royal naval med. service 1: 447–52, Oct. 1915

A very interesting psychological analysis. It begins with a description of the type of men who composed the ship's company and the influence of their previous environment. Passing then to a consideration of the nature of the influences to which they were subjected and the consequent reactions, the writer divides the time covered by these influences into three periods: First, a period of prolonged and monotonous stress during the four months that the ship was

lying in an exposed position on the East Coast; second, a period of sudden and increased stress, amounting to two days, while the ship was at sea; and last a period of quiescence while the ship was lying in a protected harbor. The writer describes with vivid analysis the critical four months in which the men passed from patriotic eagerness and pleasure in their new duties to the sorting out of friends and acquaintances, to loss of novelty and merging of individuality in component of ship's company, to automaticity in duties, to mental attention to remote matters, such as duration of war, to loss of intelligent anticipation, to unstable apathy, with nothing left to think about, when routine becomes an ever increasing stress and morbid tendencies develop, resulting in mild neurasthenia with hypochondriacal tendencies. Arrived at this stage of minor accidents all had a mental sequence of some kind. The conclusion can only be that lengthy periods of such character as the first four months should be prevented if possible. That the results were not more regrettable than they were can only be due to the standard of the men and their fine morale.—Mil. surg. 37: 608, Dec. 1915.

Bispham, Maj. W. N. Malingering: Nervous System. Mil. surg. 34: 220–21, Mar. 1914.

"Next comes the simulation of nervous diseases. A large field and much worked over by this class of patients. This will run from convulsion to maniac insanity and will test the doctor's powers of observation to the utmost. Convulsive seizures and simulated epilepsy, after the deception has been detected, can be treated only by making the patient uncomfortable during a fit and letting him thoroughly understand that you are certain he is a malingerer.

"The insane man, so-called, is very hard to treat and each case must be handled on its own merits.

"When the case is a simulation of mania he should be controlled by restraint apparatus and treatment such as ice baths instituted. All of these cases, though, have to be observed very carefully for some time before the attendant can be satisfied in his own mind that the man is not insane.

"Where melancholia or delusional insanity is simulated a careful isolation of the patient on liquid diet and denial of all reading matter will frequently produce a cure. A suspect must be watched continually without his knowledge and every move noted. After several weeks a magazine may be left on his bed or an attendant may converse with him on the news of the day. Very few can stand the isolation without reading or talking and soon break down under treatment."

Three cases are cited.

"In conclusion I would state that the detection and treatments of malingerers of all kinds requires careful study, and no doctor, particularly in the army, is justified in jumping at conclusions without thorough examination. It is frequently noticed that where a doctor is known to thoroughly examine all cases malingerers are few and unimportant."

Bost. med. and surg. j. 175: 805–06, Nov. 30, 1916. Acute Psychoses of War (Editorial)

It may be accepted without necessity for verification that the intense emotional strain associated with warfare causes acute exacerbations of some of the milder psychotic and borderland cases which were able to get along unnoticed under the less stringent requirements of civil life. Thus, cases of arrested dementia praecox, the neuroses and psychoneuroses, cyclothymia and high-grade imbecility may all be found among recruits who have been mustered in without any suspicion that such conditions existed.

Dr. Arturo Morselli, consulting neurologist to the First Army of Italy, in a lecture to the Royal Medical Academy of Genoa, classified the mental cases which he believed originated directly from the emotional excitement of battle into seven kinds, all of which he thinks have a basis of "asthenia." The term is, of course, extremely general in its English connotations. These varieties of mental disorder he gives as acute asthenia, hysteria, depression, stupor, hallucinations,

confusional states and maniacal excitement. Probably, according to the American method of classifying mental disease, we should call the first two of these conditions psychoneuroses. The depression and the excitement we should expect to find in individuals of a manic-depressive make-up, that is, the extroverted type, while the introverted type would show the stupors and the confusional states. Morselli speaks of transient hallucinations, which, of course, may arise in persons with feeble psychic resistances, that is, imbeciles, psychopaths and constitutional inferiors, from stimuli inadequate to others normally constituted—small amounts of alcohol, slight infections, mild fevers, abstention from food for short periods, and unusual emotional stress.

The modern idea of such deviations from the normal is that they are the expression of an underlying biological defect. To the experienced observer, such cases would not, as a rule, give rise to any great difficulty in diagnosis when they presented themselves for enlistment. The life history, as given by the applicant himself, is very suggestive to the alienist; his record with the Binet-Simon, Yerkes-Bridges, Healy, Fernald and other tests, his neurological examination, all supplemented by several days' observation of him, might result in the elimination of much rotten timber which later on becomes a problem to the army in the field.

The solution which suggests itself is to have a trained psychiatrist available for consultation at every recruiting station, especially in times of war.

Bost. med. and surg. j. 175: 803–04, Nov. 30, 1916. Need for Psychiatrists in the Army and Navy (Editorial)

In all the talk of preparedness it should not be forgotten that the medical branch of our military organization should be so equipped as to be able to meet any demands upon it, especially those demands arising out of the peculiarly stressful conditions incident to actual warfare. Of course we are accustomed to think of the army or navy doctor as first of all a surgeon. He must be capable of handling the cases as they come from the front—the gunshot wounds, the bayonet stabs, the burns and the broken bones. Stationed at a lonely post in time of peace, far away from any civilian physician, he must be prepared for any emergency—to reduce a dislocated shoulder, to operate upon a strangulated hernia or a gangrenous appendix.

To their credit be it said that the personnel of the medical branch of our service is composed of men who are amply equipped, not only as surgeons, but as internists. When we consider that every one of them has had, besides his four-year medical course, a year, at least, in a general hospital and a year of postgraduate work in the Army or Navy Medical College, their high average of efficiency is explained. And yet there is one branch of medicine which it would seem should be recognized as too complex and too important to be left entirely to men who necessarily must be able to give only a small part of their studies to it. We refer to mental disease. It is hardly possible for the army or navy surgeon, speaking generally, to acquire a sufficient knowledge of psychiatry to do justice to such cases of mental disorder as develop naturally and sporadically under service conditions or burst into being endemically under the nervous strain of battles. The frequency of mental disease among soldiers and sailors, as well as the necessity for its adequate study, is becoming appreciated and has been written on by Bouchard, Granjux, Hanry, and Rayneau in France; Borovikoff in Russia; Schultze and Heuse in Germany; and White, Richards, Smith, King, Woodson and Sheehan in the United States. It has been only comparatively recently, however, that the necessity for establishing a field hospital for the care of such cases has been understood. The first hospital of this kind was organized in Harbin during the Russo-Japanese War.

The desirability of having their medical officers better equipped for the handling of such cases is, at present, recognized by both branches of the service; and at the Government Hospital for the Insane every winter the Superintendent, Dr. White, gives a series of lectures to the members of the Army and Navy Medical Colleges. Also it has been the custom for some years past to detail

one man from each service at the Government Hospital for the Insane, to study mental disorder for two years at a time. An officer recently detailed there, Capt. Edgar King, has published an interesting account of his studies of mental disease in soldiers. In this, among other things, he calls attention to the fact that one-fifth of all soldiers discharged are discharged on account of mental disability.

But striking as is the prevalence of mental disease among our soldiers and sailors in times of peace, we must remember that this would be greatly increased during war. Such, at least, has been the experience of the nations now in conflict, as evidenced by the many reports of mental and nervous affections which reach the medical press. Injuries of the central nervous system, due to the wind of explosives, hysterical aboulias developing in the heat of battle, hypomaniacal outbursts in protracted battles, nerve injuries by missiles, malingering of mental symptoms to escape active service, hypochondriasis and neurasthenia in recruits—all these and many more will call for the intervention of the trained neurologist and psychiatrist. As White says, "A man may be quite able to get along all right—in fact, to perform his duties with marked efficiency in time of peace,—who would break completely under the stress of war. This has long been realized as true of the physical, but we must begin now to realize it as equally true of the mental, especially as the game of war comes more and more to be played with brains."

Butts, Heber. Insanity in the Navy. U. S. naval med. bull. 4: 459–75, Oct. 1910. Illus.

This article covers admissions of insane men of the Navy and Marine Corps into the Government Hospital for the Insane from January 1, 1899, to June 1, 1910.

"The mental patrimony of many of the insane men of the navy was squandered by their dissipated ancestors long before they entered service; others began life well, but their mental capital was limited, and in the struggle for existence it was nearly all expended prior to their entry into the service, so that they really enlisted as psychopaths. These psychopaths have, for the most part, been the shiftless, irresponsible men of the service. Prior to their enlistment an unduly large proportion of them have been professional tramps or hoboes, and after their entry into the service, they become malingerers and general court-martial prisoners."

Usually insanity becomes apparent within a comparatively short time after enlistment. In most cases the mental disorder, or predisposition thereto, exists prior to enlistment or is due to causes not in the line of duty, such as alcohol or syphilis.

The recovery rate of insane men in the navy is much higher and the death rate much smaller than in the case of the insane coming from civil life. Nearly seventy per cent of the insanity in the navy occurs in men under thirty years of age, probably because the majority of men in the navy are under that age limit. Of the foreign born, Ireland furnishes a conspicuously large number of insane men, and for that reason great caution should be exercised in enlisting the Irish. The Germans show the best mental make-up. The percentage of privates in the navy is relatively small, but the percentage of privates becoming insane is relatively large, probably due to the fact that the recruiting work for the U. S. Marine Corps is performed largely by civilian physicians, many of whom fail, from lack of experience, to appreciate at all the type of men desired. The following table gives the forms and percentages of the psychoses in the navy as diagnosed by hospital authorities:

Psychoses	Number	Per cent	Whole hospital admissions, fiscal year 1909
Dementia praecox	177	33.52	237
Manic-depressive(circular, recurrent)	43	8.14	72
Acute melancholia	90	17.04	
Acute mania	37	7.01	
Acute dementia	13	2.46	
General paresis	27	5.11	50
Chronic melancholia	15	2.84	
Epileptic psychoses	11	2.08	16
Confusional insanity	12	2.27	
Imbecility	9	1.70	8
Paranoia	7	1.33	38
Chronic dementia	4	.76	
Traumatic insanity	3	.57	1
Chronic mania	1	.19	
Organic dementia	1	.19	
Terminal dementia	1	.19	
Delirium tremens	2	.38	
Alcoholic hallucinosis	5	.95	
Acute alcoholism	1	.19	
Korsakow's psychosis	1	.19	
Intoxication psychoses			
Alcohol	16	3.03	54
Morphine	2	.38	1
Cocaine	2	.38	1
Potassium bromide	1	.19	2
Cerebral syphilis	2	.38	5
Infection—exhaustion psychoses			
Malaria	2	.38	
Typhoid fever	1	.19	
Confusion in a degenerate	1	.19	
Hysteria with depression	1	.19	9
Psychasthenia	1	.19	4
Involution melancholia	1	.19	9
Acute hallucinosis	1	.19	2
Depression in a psychopath	1	.19	5
Acute psychosis in a psychopath	1	.19	
Unclassified excitement	1	.19	15
Not insane	14	2.65	11
Not yet diagnosed	20	3.79	
Total	528	100.00	

Another table shows percentage of causes, with alcoholism much the most frequent. Heredity, syphilis and sunstroke are exciting causes in inferior individuals.

Tables showing cases of insanity existing prior to enlistment, and miscellaneous data about family, former life, etc., of patients, prove that candidates for enlistment should be subjected to mental tests, or a period of several months' probation, and to an examination as to personal history before being accepted. "The service oftentimes secures, as the result of such neglect, an utterly worth-

less recruit who is quite capable of costing the government two or three times what the four years' enlistment of a desirable man costs, to say nothing of the annoyance of a worthless recruit to other officers in the way of inefficiency, court-martials, surveys, transfers to hospitals, and medical care and treatment." More care also should be exercised in excluding syphilitic and parasyphilitic individuals, and in furnishing for the personnel of the navy diversions and recreation with a view to lessening the desire for outside pleasures, some of which lead to venereal infection. Illustrative cases follow.

Noteworthy features of the article are its valuable statistical tables, and a series of reproductions of photographs of men who passed the physical examination for enlistment but who were mentally unsound.

Butts, Heber. Further Observations of the Insane of the Navy. U. S. naval med. bull. 6: 193–212, April 1912. Illus.

This report deals with 146 men of the Navy and Marine Corps admitted into the Government Hospital for the Insane from June 1, 1910, to December 31, 1911. It supplements Surgeon Butts' report published in 1910.

A table giving percentages of "recovery," "improvement," "died," etc., shows the usual large number of discharged as "not insane," proving that, in many cases, the patient was evidently convalescing from some temporary mental disturbances, and in other cases really not insane, but recovering from some unusual strain, dissipation, etc. Cases follow. Another table shows that insanity usually occurs under thirty years of age, and that proportion of insane under this age has increased since Surgeon Butts' former report of 1910. The proportion of foreign born insane has slightly decreased since the report of 1910. The proportion of insane privates has also decreased since that date, due probably to more careful selecting of recruits.

Tables giving naval and hospital diagnoses of mental disorders, with percentages of occurrence, follow.

Table Number 6

Hospital diagnosis	Number	Per cent	Hospital diagnosis	Number	Per cent
Dementia praecox	66	46.81	Acute confusional insanity	2	1.42
Symptomatic depression	1	.71	Undifferentiated mental depression	1	.71
Manic-depressive insanity	5	3.54	Alcoholic hallucinosis	1	.71
Dementia paralytica	15	10.64	Infection psychosis	1	.71
Cerebral syphilis	5	3.54	Post-traumatic psychopathic state	1	.71
Psychoneurosis	1	.71	Diagnoses not yet determined	5	3.54
Not insane	29	20.57			
Traumatic psychosis	1	.71	Total	141	100.00
Prison psychosis	1	.71			
Imbecile	3	2.13			
Psychogenetic depression	3	2.13			

"Many of these cases are merely those of psychopathic individuals not mentally strong enough to withstand the peculiar stresses of navy life, but well able to support themselves in other ways. These cases should be cared for in the psychopathic ward of a naval hospital until cured. It is a fine blunder to transfer an officer or enlisted man to an insane asylum who manifests only a few temporary or no symptoms at all of mental disorder after his transfer to that

institution, but it is an equally fine blunder not to transfer to an insane asylum a man suffering with a chronic mental disease, often of very insidious onset, like general paresis and some cases of dementia praecox, or to punish in a naval prison, on sentence of general court-martial, a man who is mentally irresponsible, and has committed some offense while in this condition." Naval offenders should always be examined, before court-martial sentence is passed, by a medical officer trained in psychiatry for evidence of mental disorder, or constitutional mental inferiority.

"Desertion, drunkenness and fraudulent enlistment are the most common offenses of these insane men." Only two cases of malingerers were found among those studied. There is apparently a marked increase in the number of cases of general paresis.

A series of reproductions of photographs of mentally abnormal and defective types follows.

Chavigny, P. War "Reactions." Paris méd. 6: 8–13, Jan. 1, 1916

Chavigny (Paris méd., January 1, 1916), says that soldiers on active service are peculiarly liable, under the strain of the number and variety of the duties imposed upon them, to show mental breakdown by "reactions" which expose them, if their nature is not recognized, to be punished for breaches of discipline. Temporary loss of memory may make a man forget that he is a soldier and leave the trenches, with the result that he is court-martialled; the same thing may happen in cases of deaf-mutism from shock. The reactions of real insanity are shown by desertion, abandonment of post, refusal to obey, breaking of arms and destruction of equipment, burning of buildings, mutiny and acts of violence. These offenses include almost all those which under military law are visited with increased penalties in time of war. Chavigny relates several illustrative cases in which an expert examination saved men from death, and obtained for them a recognition of unfitness for military service. Chavigny insists that simulation is relatively rare, and he strongly urges the doctor, even when a case looks most suspicious, not to allow himself to be carried away by a first impression. He should carefully observe the man, not letting him, or any one about him, know that he is under suspicion. The expert must remember that a mistaken diagnosis of simulation justly exposes him to the severest criticism. But having made up his mind that the case is one of malingering, he should act without hesitation. The author relates a curious case of what he calls supersimulation. A censor of correspondence from the front intercepted a letter from a soldier to his wife, in which he told her not to worry about him when she was informed that he was in hospital, as in order to get away from the firing line, where he ran too much risk, he was shamming deaf-mutism. He instructed her how she was to answer all questions in case of inquiry, so as to give a convincing history of hereditary and personal antecedents. The man at this time had been under Chavigny's care, and was being treated for typical deaf-mutism caused by shell shock. All the classical symptoms were present—local anaesthesias peculiar to such cases, persistent cough, etc., besides loss of speech and hearing. Examination after cure of the deaf-mute condition showed a very marked state of mental inability. But more typical than this, inquiry of the man's family doctor confirmed the absolute reality of the hereditary and personal history which, in his letter to his wife, he had described as invented to suit the requirements of his case. The wife, on close examination, confessed that her husband was the victim of his imagination, as it often happened that he could not distinguish his own inventions from what he had actually seen. He was, in fact, a mythomaniac, who doubtless in order to give himself some importance had invented a disease from which he really suffered. Ravaut, as the result of a series of puncture experiments in cases of mental disturbance caused by the war, had pointed out the frequent presence either of abundant albumin or blood in the cerebro-spinal fluid in men who for lack of objective symptoms might have been put down as simulators. Chavigny thinks this may be a useful help in diagnosis, but only if the result is positive. He has seen it negative in cases as to the genuineness of

which there could be no doubt. Furrowing of the nails, dating from the appearance of nervous or mental disturbance, may be important in cases of late or retrospective examinations.—Ontario Hospitals for the Insane. Bulletin 9: 7–8, July 1916.

Clarke, J. Michell. Some Neuroses of the War. Bristol medico-chirurgical journal 34: 49–72, July 1916

A neurosis, according to Gould, is an abnormal nervous action or an affection of the nerves or nerve-centres of a functional nature. Dr. Michell Clarke excludes all cases which exhibit any one or more of the definite clinical signs which are usually associated with structural change in the central nervous system. He admits, however, that present conceptions of what constitutes functional, as constrasted with organic, lesions may require modification. Several observers have noted that organic lesions of the nervous system may be produced without evidence of external injury. Usually there will be found structural changes in these cases.

It is, however, possible that minute multiple lesions, especially if widespread, may through a massed effect give rise to symptoms or signs not recognizable by present clinical methods of investigation as due to an organic lesion, but rather to those of functional disturbance or neurosis. These shade indefinably into cases with undoubted signs of structural change.

As the neuroses of war are partly due to the same causes as those occurring in civil life, and partly to other special causes, some of them will be familiar while others present unfamiliar or special features. Hysteria, for example, exhibits the ordinary manifestations, namely, monoplegias, paraplegias, and hemiplegias, with or without sensory disorders and muscular contractures, affections of the special senses, such as deafness or amaurosis, and of special nervous mechanisms such as of speech, and of anorexia or vomiting. Most of them are quickly cured by the accepted methods, and cases of recent origin are more amenable to treatment than those of long standing. Hysterical paralysis in a limb may be caused by a wound which may be superficial or deep, slight or severe. Most commonly the paralysis is distal to the injury or does not extend further centrally than the position of the wound. Anaesthesia is usually present and is of the glove or sleeve, stocking or sock distribution. The upper limit of the anaesthesia is transverse to the long axis of the limb, as a rule is sharply defined, and the boundaries of the loss of the different forms of sensation are coterminous. All forms of sensation may be lost together, but those to light, touch, and pain are more frequently affected than those to heat or cold. Sensation to either heat or cold may be preserved and the others lost, or cold felt as warm. Attention to the distribution and characters of the anaesthesia rarely leaves any doubt as to its true nature. The affected limb is often cold, bluish-red, and sometimes slightly oedematous.

The cause need not be a wound. These troubles may, as in civil practice, occur after any injury. Hysterical contractures of the limbs without paralysis are not so common. Hysterical paralysis and anaesthesia may complicate paralysis due to an organic lesion. Lapse of time aids in clearing up the diagnosis, for the functional disorder tends to pass off. Even in hysterical paralysis of long standing there may be wasting of the muscles; it is of slight degree and affects the muscles of the whole limb. The electrical reactions are retained.

Aphonia may be present; there is a tendency to relapse, and it is difficult to bring about a permanent cure. There may be dumbness with or without deafness from shell-shock. In most cases the cause was the shock of a shell-explosion, with or without burial, sometimes producing loss of consciousness for varying periods, sometimes not, but in either case leaving the patient in a dull, dazed, or stuporous state, from which he emerged to find himself dumb and often deaf as well. In most cases hearing returned before speech. Recovery took place in some quite suddenly; in others gradually, with ability to pronounce a few words in a stuttering manner at first. Patients were aided by means of demonstrating to them the physiological movements of the lips and tongue in speaking. Some

of them exhibited the eagerness to write what they cannot say, as seen in the classical type of this affection, but others were dull and apathetic. Similarly with those suffering from deafness without obvious lesion the patients did not make the efforts to hear that a deaf person does.

Hysterical vomiting occasionally occurred. It was cured by keeping the patients strictly on milk until vomiting had ceased for some time. Hysterical convulsions occurred in only one case. He had not suffered from epilepsy. There was a history of a slight wound, and a subsequent fall on the head from a height of six feet.

In other cases the hysterical features were accompanied by more or fewer evidences of a state of general nervous shock. These neuroses present symptoms or groups of symptoms not familiar in civil practice before the war. The causes are numerous—anxiety, overstrain, want of sleep, wounds, concussion from high explosives, noise, horrible sights, and fear. The most potent are the concussions caused by high explosives and burial in the débris produced by a bursting shell. The longer the patient was buried the greater the effect. In the majority of these cases of neurosis there is a history of mental or nervous disease in the patient's family. Occasionally the breakdown occurred only after the system had been weakened by some debilitating disease.

The chief symptoms noted are exhaustion or prostration, both bodily and mental, apathy even to the extent of an absence of the desire to recover, pronounced fatigability. There is often wasting or disturbance of nutrition, with or without anorexia. Depression, with loss of self confidence, is present in the early stages. It is often associated with fears of permanent paralysis or ill-health. Tremors of the limbs are common. Patients are extremely sensitive to noises. Cerebration is slow. Memory is defective; in the more severe cases even for remote events. Affections of the special senses are common soon after the accident, but seldom persist long. Definite nystagmus is rare; nystagmoid movements are not infrequent. Insomnia is at first the rule, and sleep is disturbed by terrifying dreams. In some of these cases there is a more defined loss of power, either hemiplegic or paraplegic. As a rule there is at first more or less general loss of power of all the muscles of limbs and trunk. In all cases electrical reactions were normal; the results in the hemiparetic cases were good. Treatment by rest, good feeding, massage, passive movements, and exercises. The leg in all cases recovered before the arm.

Incoordination is present in some cases. The deep reflexes are usually exaggerated. Sphincters unaffected.

Considering the cases as a whole, Dr. Michell Clarke concludes that the pathological changes must be widely distributed through the nervous system. "The disturbance affects the highest cortical levels, the middle levels with the subconscious mechanisms for everyday activities, the motor centres in the cord with their issue in the final common path, and the muscles themselves, and often also the afferent paths and the receptive apparatus for localization and the components of deep sensibility." There is possibly a block in the passage of nervous impulses from one neuron to another, and this may be due to an alteration in the constitution of the terminal ramifications of the axones and the dendrites. The disorder of voluntary movement may be explained by an overaction of the cerebellum, or by the want of counteraction of the cerebellum owing to the impulses from the cerebrum being in abeyance.

Cases of conscious simulation of nervous disorders have been conspicuous by their absence; the influence of fear is not so great nor so lasting as might have been anticipated. In a few cases, however, the fear of returning to the front does retard recovery; where, therefore, there is no prospect of his return to active service the patient should be so informed.—H. J. Norman. J. of mental science 63: 119–21, Jan. 1917.

Eder, M. D. Psycho-Pathology of the War Neuroses. Lancet, Lond., Aug. 12, 1916, p. 264–68

Cases are described of soldiers suffering from hemianalgesia, symbolic conversion, recurrent mutism, functional amblyopias, fear obsession, and maladapta-

tion. It is the author's view that in most cases the neurosis has arisen as a result of the strain of quite extraordinary conditions. The army is not composed of fighting men but of men from the mill, mine, farm, counting-house and country home. Men brought up to one occupation are suddenly, with scant training, called upon to make new adaptations. In the course of their normal life they would probably be equal to any emergency, "but for some of them—among the very best—the new condition called out to them to strain themselves to the utmost, and this was just a little too much." A recital of results of treatment by psychoanalysis and hypnotism concludes the article.

Emslie, Isabel. War and Psychiatry. Edin. med. j. 14: 359–67, May, 1915

Isabel Emslie notes that the war has not made any increase in insanity as far as civilians are concerned. Among those in which insanity may be said to have been caused by the war, the great proportion of cases are those people who have had previous attacks and those who are weak-minded or very highly strung. Few normal persons seem to have been affected. Many of the admissions to the asylum show that though their psychoses were not actually caused by the war, nevertheless this was playing a large part in evolution. This factor was very noticeable in the admissions which occurred in the first month or two after the commencement of the war. It has gradually become less and less frequent, till now it is rarely seen. The mental shock of the war is apparently not so keenly felt now by the unstable mind as when the blow first fell. Of patients already suffering from psychosis when the war started, it could not be said that one had a relapse which might be traced to the war. The patients who were most affected were the paranoiacs, who, though they apparently had a normal outlook on the war, really had their own distorted views of it and had developed many and varied delusions.—Med. rec. 88: 205, July 31, 1915.

Forsyth, David. Functional Nerve Disease and the Shock of Battle. Lancet, Lond., p. 1399–1403, Dec. 25, 1915

David Forsyth presents a study of the so-called traumatic neuroses, cases of which have become unprecedentedly numerous since the outbreak of the war. The clinical picture in these cases is best described as that of "nervous exhaustion." It seems that the intensity of the shock is measured in terms not of the trauma, but of the sensitiveness of the individual, a psychopathic tendency having been noted by the writer in all cases coming under his notice. Some cases recover with rest and quiet in the course of a few months; in others the treatment must follow psychoanalytic methods. With an increasing experience the writer entertains a strong doubt as to the judiciousness of sending any case of nerve shock, with few exceptions, back to the firing line. If this source of anxiety could be removed the patient's chance of making a speedy recovery would be increased.—Med. rec. 89: 166, Jan. 22, 1916.

Gerver, A. V. War Psychoses. Russkiy Vrach 14: 841–64, No. 36

The writer divides the war psychoses into three classes: To the first belong psychoses arising in persons without any hereditary taint, being caused solely by the war environment and violent emotions resulting from battles. To the second class belong psychoses that would develop in ordinary circumstances of peace, but which were prematurely brought on by the war. Here belong dementia praecox, manic-depressive insanity, paranoia, paralytic dementia, etc. To a third class belong traumatic psychoses, caused by wounds and contusions. The psychoses of the first category do not differ in any way from the old types, but they may be subdivided with those caused by battles, by trench life, and the rear guard psychoses. Clinically they belong to the acute mental disorders, amentia and asthenic psychoses. Frequently they develop in the form of neurasthenic insanities. The specific character of war psychoses of all the three classes consists in the peculiar coloring and the character of the hallucinations, illusions, delusions and the patient's conduct. The contents of the hallucinations and delusions are the experiences of the war life. Another feature is de-

pression, followed often by excitement, and confusion of consciousness. The character of the battle (artillery, infantry, bayonet attacks, etc.), the duration of the war life at the front, the course of military events (offensive or defensive, victories or defeats), and the general morale of the army determine the larger or smaller proportion of psychoses that develop. Gerver further claims that in the present campaign the amount of psychoses is comparatively small, about one per 1,000. The main cause of the decreased rate is the total absence of alcoholism. In the Russo-Japanese War this was responsible for one-third of all the psychoses. In the present campaign there has not occurred a single case of alcoholic insanity.—Mil. surg. 38: 91–92, Jan. 1916.

Glueck, Bernard. The Malingerer; a Clinical Study. International clinics, v. 3, series 25, 1015, p. 200–52

There is a gradually gained conviction that malingering and actual mental disease are not only not mutually exclusive phenomena in the same individual, but that malingering itself is a form of mental reaction manifested almost exclusively by those of an inferior mental make-up, and cases of pure malingering in normal individuals are rare.

Further, malingering, as well as lying and deceit, far from being a form of conduct deliberately and consciously selected by an individual for the purpose of gaining a certain known end, is in a great majority of instances wholly determined by unconscious motives, by instinctive biologic forces over which the individual has little or no control. This makes differentiation between the genuine and malingered symptoms in a given case very difficult.

In the last analysis, malingering is a special form of lying. It appears to certain individuals as the only possible means of escape from and evasion of a stressful and difficult situation.

The transition from absolute health to distinct mental disease is never delineated by distinct landmarks but shows any number of intermediary gradations. To state definitely where normality leaves off and disease begins would be impossible. However, legally, no intermediary stages between mental health and mental disease are permitted—an individual must be sane or insane.

In malingering we see the application of deceit and lying to a definite situation. The malingerer aside from being a malingerer is worthless mentally, and this mode of reaction is at times resorted to by individuals who had always been looked upon as being far from incompetent, which proves that under special stress, especially mental stress, men readily sink to a lower cultural level and resort to the defensive means common to this level.

Clinically, malingering is to be considered from three distinct viewpoints:

1. Malingering in the frankly insane;
2. Malingering in those apparently normal mentally; and
3. Malingering in that group of borderline cases which should rightly be looked upon as potentially insane and as constantly converging upon an actual psychosis.

It may be difficult for the lay mind to appreciate that an individual may be suffering from an actual psychosis and at the same time malinger mental symptoms. The frankly insane at times manifest conduct which, taken by itself, differs in no way from normal conduct, and the so-called normal individual at times exhibits a type of reaction which is essentially of a psychotic nature.

The conclusions which may safely be drawn from the study of malingering as it is manifested in criminal departments of insane hospitals are as follows:

1. The detection of malingering in a given case by no means excludes the presence of a mental disease. The two phenomena are not only not mutually exclusive, but are frequently concomitant manifestations in the same individual.

2. Malingering is a form of mental reaction manifested for the purpose of evading a particularly stressful situation in life, and is resorted to chiefly, if not exclusively, by the mentally abnormal, such as psychopaths, hysterics, and the frankly insane.

3. Malingering and allied traits, viz., lying and deceit, are not always consciously motivated modes of behavior, but are not infrequently determined by

motives operative in the subconscious mental life, and accordingly affect to a marked extent the individual's responsibilities for such behavior.

4. The differentiation of the malingered symptoms from the genuine ones is, as a rule, extremely difficult, but great caution is to be exercised in pronouncing a given individual a malinger.—R. Sheehan.

Grasset, J. Clinical Lecture on the Psychoneuroses of War. Med. press and circular, Lond., June 9, p. 560–63; June 16, p. 586–87, 1915

In common with Dr. W. A. Turner, writing separately in the *British Medical Journal*, under date of May 15, 1915, on "Cases of nervous and mental shock observed in the base hospitals in France," Dr. Grasset describes deaf-mutism (occasionally, but less frequently, blind deaf-mutism) as one of the clinical surprises of the great war. These cases are caused by the explosion of big shells in close proximity to the patient. The shock is both physical and mental. "A typical instance is the bursting of a shell at close quarters by which a soldier is hurled several yards through the air and more or less completely buried beneath earth or the bodies of his comrades. He loses consciousness, and on recovery, especially if he be in an emotional or overtaxed condition, finds that he can neither see, hear, nor speak. . . . He is unable either to convey or receive impressions."

Dr. Grasset suggests, as an explanation of the psychology of these cases, that these patients probably think that they have died, as the only thing which unites such a patient to existence is the preservation of his sensibility and sense of movement. The remarkable example is cited of an ingenious nurse who placed a pencil in the hand of one of these blind deaf-mutes, and guided it while she wrote a question on a piece of paper. The patient replied to the question, writing the answer in a firm round hand. "In these cases sight usually returns first, hearing next, and speech last of all. Both sight and hearing may suddenly return."

Among the less interesting psychoneuroses produced by shell shock are traumatic neuroses, the most important clinical manifestation of which is hemiplegia, or, rather, anesthetic hemi-impotence; hysteria, neurasthenia, disturbances of sleep, and changes in character, as well as various psychoses. The opinion is expressed that personal and hereditary antecedents (ante bellum) have comparatively little value in the psychoneuroses of war, but that in the etiology of the psychoses the personal and hereditary elements play infinitely the more important role.

Out of 193 cases of traumatic lesions of the nervous system examined by Dr. Grasset during the first three months of his service, fifty-nine cases of psychoneuroses were found.

It is stated that the marked psychoneuroses are not as a rule provoked by the graver injuries. "The origin is more dramatic. The explosion of a bursting shell which hurls the victim three or four yards through the air and frequently buries him beneath corpses and débris; the explosion of a shell in the trenches in his immediate vicinity by which the comrades at his side are killed, men who are perhaps breakfasting with him; an explosion which kills a comrade and perhaps hurls the lifeless body at him; the impact of a projectile which bruises and stuns without actually wounding him; these are the originating causes of the psychoneuroses of war. . . . When the victim recovers consciousness, which he does sooner or later, he finds that he is paralyzed. He thinks that he has lost one of his limbs. He is blind, deaf, and dumb, or he is in a shattered and anxious mental condition." . . . The number of patients suffering from mental desease is bound to be greatly increased as the war continues. War conditions "try men's souls" probably more than any other human experience. Psychoses and psychoneuroses are certain to claim a tremendous toll as one of the aftermaths of war.—H. Butts, U. S. naval med. bull. 10:127–28, Jan. 1916.

Hurst, Arthur F. Functional Nervous Disorders. In his Medical Diseases of the War. 1916. p. 1–40. References

"Functional nervous disorders have been relatively more common in this than in any previous war, mainly owing to the use of enormous numbers of high explosive shells. The symptoms produced do not differ from those seen in civil life, but they have been common instead of rare. It is difficult to classify them satisfactorily. They might, for example, be separated under the heads of neurasthenia, psychasthenia and hysteria, but these conditions are often present together, and many cases occur which cannot be correctly included under any of these heads. They might also be classified according to their etiology; the largest proportion of functional nervous disorders are due to the effects—apart from actual wounds—produced by high explosive shells whilst others result from the long continued physical and mental strain caused by active service. . . . No scientific classification will therefore be attempted, but the various functional nervous disorders, which have been observed during the war, will be successively described. . . ."

The writer then takes up the etiology of neurasthenia. He states as the primary causes physical fatigue and mental strain. On account of the latter factor, officers have suffered more than men because of greater responsibility. There may also be a toxic factor, originating in illness, great heat, and in some cases in anti-typhoid inoculation. An important group of cases are those in which a physical injury is the exciting cause.

Shell-shock may be defined as the symptoms produced by exposure to the forces generated by the explosion of powerful shells without any visible injury. In many cases physical concussion has also occurred. Symptoms occur most readily in those with a neuropathic inheritance, in those who are abnormally emotional or who have previously suffered from a "nervous breakdown." The author then describes the pathology of shell-shock. Carbon-monoxide poisoning enters largely into the symptoms of shell-shock. These are very varied, and the author explains why one man becomes deaf, another blind, another dumb and another hemiplegic. As a result of shell-shock, all the functions of the body are temporarily in abeyance for a period varying in different cases. These functions gradually return, some more rapidly than others. The patient suddenly realizes with his slowly awakening mind that one of these functions is lacking, worries over it, and by auto-suggestion perpetuates what would otherwise be a temporary incapacity. Several case histories of this kind of hysterical paralysis are cited.

The writer then discusses and cites cases of stupor, amnesia, double personality, headache, mental irritability, fatigue, insomnia, nightmares, hallucinations, obsessions, functional asthenopia, hysterical blindness, hysterical deafness, hyperacusis, hysterical dumbness, stammering, aphonia, hystero-epilepsy, tremor, paralysis and contractures, pain existing after the cause has been removed, malingering, and organic nervous diseases.

In the way of treatment complete physical and mental rest are essential for both neurasthenia and shell shock. The use of suggestion, hypnotism and drugs as therapeutic measures is discussed.

The chapter is followed by a list of selected references.

Jörger, Johann. Mobilization as a Traumatic Cause in Producing Dementia Praecox. Corr.-Bl. für Schweiz. Aerzte 44: 1553–70, Dec. 12, 1914

Dr. Jörger's paper is based on experience at the Zurich Asylum. As Switzerland is not at war, the effects of simple warlike preparations can be studied apart from those produced by war itself. In his paper he relates the particulars of thirteen soldiers who were called up on mobilization, and who soon after developed insanity, of the dementia praecox type. In analyzing these cases he finds they fall into three groups. In the first the symptoms of dementia praecox had been present in a mild form for some time previously. The stress of mobilization merely added fuel to a fire already burning. In the second group there was a history of previous attack which had been recovered from. In the third group

the patients had previously been perfectly well. This forms the largest of the groups. Some of these recovered quickly, especially those in which alcohol was a complicating factor, but others improved very slowly, and seemed likely to be incurable. In addition to these he relates the cases of four women who became insane as a result of excitement produced by war. It is noteworthy that in all of them, as well as in some of the men, there was a great dread that they would be shot or experience a sudden and violent death. He does not state whether any other form of mental disease besides dementia praecox has been met with by him as a result of mobilization. He likewise makes no suggestion as to why this form so frequently results from that cause, except in the first group mentioned above. It is probable that, like many others, he considers dementia praecox to include nearly all cases of insanity occurring between puberty and senility.—Edin. med. j. new series 14: 399–400, May 1915.

Journal of Amer. med. assoc. 63: 1396–97, Oct. 17, 1914. Army and Mental Disease (Editorial)

The mental anguish, depicted by the numerous tales of suicide, madness and desertion among soldiers, to say nothing of mental frenzy expressing itself in wanton murder, that have come to us from our ill-fated friends across the sea, leads us to realize that there have been made as yet no scientific studies of the effect of war on the minds of officers and enlisted men in the army. Fortunately for our nation, there has been no opportunity to study the effect, on a large body of men, of short rations, loss of sleep, great emotionalism, exhausting exposure, excessive physical exertion, homesickness, etc., yet these in combination produce a strain that might well prove fatal to the equilibrium of many a mind that in regular routine would show no weakness. To be mentally sound in such conditions is of more importance than to pass the eyesight test, or to be typhoid proof.

In the light of modern psychiatry it is rumored that more than one great battle has been lost by a general who was in the early stage of paresis and doubtless dozens of men who have met the fate of deserters had their doom written in their brains, could their officers have read the signs of dementia praecox. Although the mental effects of war strain have not been studied, our war department has been carrying on, under the surgeon-general's advice, a very interesting inquiry concerning the mental status of the army. The studies show that the mentally diseased, and those who are congenitally or otherwise mentally defective, form an important problem in armies and navies.

Of all the discharges for disease or external causes, practically speaking one-fifth are on account of mental disease in some form. That is to say out of 1,062 men discharged in 1912 on account of disability from all causes, more than 200 were found to be mentally diseased or defective during the year: and these did not include the retirements for neurasthenia or hysteria, which, although the patients are not insane in the accepted sense, are in reality mental diseases that will seriously affect one's efficiency in time of strain.

Of all the mental diseases, it was found that dementia praecox was by far the most frequent form; it averaged about fifty-six per cent each year of all the dismissals. In addition to these, there is no knowing how many cases there might have been among the soldiers who deserted through the year, or were dishonorably discharged on account of "previous convictions by summary court," or who attempted suicide. Many of them, without doubt, had mild or unrecognized cases of dementia praecox.

The report gives a clear, concise outline of the modern conception of dementia praecox, explaining the way in which it may appear in the army in young men who have never shown any of the symptoms of irresponsibility when sheltered by their parents or friends, but who cannot "get along" when they are required to speak, act, and even think in prescribed and orderly fashion.

The symptoms, with the vivid case descriptions that follow, will afford the regular army surgeon much insight into cases that would seem to be merely undisciplined. In fact, the text of this bulletin will be of tremendous social value to every officer, as well as to any one dealing with large bodies of men whether in reform schools, prisons, factories or mines.

In the same clear, concise manner paranoid mental states are treated, also manic depressive psychoses, general paresis, syphilis of the nervous system, arteriosclerotic mental disturbance, hysterical psychosis and the constitutional psychopathic states.

It is interesting to note that the military prisons frequently turn over men who have been convicted for desertion, assault, murder, theft, who were probably at the time suffering from mental diseases that were not recognized until they became so pronounced that the prisoners had to be sent to the Government Hospital for the Insane.

Even despite the advice of experienced alienists, men are condemned to death by jurors, instructed by lawyers who fail to grasp the significance of these peculiar disturbances in the emotional sphere—delusions, hallucinations and sexual perversities. The pages of this bulletin would be excellent reading for the occupants of the jurors' box in a criminal law court; for what holds true of enlisted men matches up in a pretty fair average to men in general.

Journal of Amer. med. assoc. 66: 440–41, Feb. 5, 1916. Hypnotism in War Hysteria (Berlin Letter, Dec. 14, 1915)

Professor Nonne recently delivered an interesting lecture before the Hamburg Medical Society on the value of hypnotism in the treatment of so-called war hysteria, a condition which, in his experience, is extremely common among the participants as well as among the injured. Under this head Nonne places the motor and sensory nerve disturbances that are so frequently combined with vasomotor symptoms, with or without mental disturbance. Cases of tic, stubborn tremor and severe and stubborn vasomotor disturbances Nonne regards as being functional and not organic or suborganic. The truth of this belief is confirmed by the good results obtained from hypnotic suggestion in the treatment of these conditions. The causation of this hysteria may therefore be mechanical or pathologic or idiopathic, although the etiologic factors are frequently combined. Nonne does not believe it justifiable to place in a separate classification cases of cramp neuroses, akinesia, dyskinesia amnestica, vasomotor syndrome, and fear and fright neuroses, and he warns against the use of a terminology which apparently indicates an unfavorable prognosis (traumatic neuroses). The war has shown that the conception that hysteria is merely a form of degeneration, as well as the freudian theory, are based on wrong premises. Nonne has based his statements on experiences gained in his capacity of consultant in the reserve hospitals of Schleswig-Holstein and various hospitals of Hamburg. Among 1,800 cases of war injuries there were twenty-six cases of pure neuroses agreeing with the statistics of Biss, Horn and others as to the frequency of traumatic neuroses. Nonne cites cases of hysterical paralyses which were diagnosed as (1) plexus paralysis; (2) cerebral paralysis; (3) spinal paralysis; (4) organic cerebral lesions; (5) ischemic paralysis; (6) arthritis deformans, and (7) inflammation of serous membranes. These wrong diagnoses were in many cases accepted in the various hospitals of which patients were inmates. It is said that the reason for these wrong diagnoses was the fact that the classical Charcot hysteria is not sufficiently well known, and because these cases are not common in the general practice of a physician during times of peace. The diagnosis of classical cases is easily made because of the characteristic symptomatology. The experiences gained in the war have confirmed this statement. Restriction of the field of vision is frequently, although not always, present; sensory disturbances occur less often, and anomalies of mucous membrane reflexes occur very irregularly. The hysterical character is usually not present, but vasomotor disturbances occur with astonished frequency; likewise isolated muscle contractions. Nonne demonstrated cases of isolated contractures of muscles in the peroneal group, and isolated contractures of the elbow joint, the flexor muscles of the thumb and the interossei. In more than half of the cases the neuropathic tendency is missed even when the most careful anamnesis is made. It is impossible to differentiate on the basis of complete absence, or preceding loss, of consciousness. Experience has shown that a somatic trauma alone, aside from a psychogenic cause, may produce the hysterical syndrome. By far the most

frequent traumas concerned in the etiology of this condition are, in the order named, shell contusions, wounds, fatigue and fear; finally, there are cases, by no means infrequent, in which a particular exciting cause cannot be demonstrated. We have learned that the hysterical syndrome may, under unusual conditions, occur much more easily in a so-called normal nervous system than has heretofore been believed to be the case, and it is in these cases that Nonne has found the prognosis to be very much better under hypnotic treatment. From the middle of October, 1914, to the middle of September, 1915, Nonne treated sixty-three cases of "grand hysteria." Fifty-one of these patients were cured, including twenty-eight "rapid cures" and twenty-three cases in which the cure was effected more gradually. By means of waking suggestions, Nonne succeeded in curing five patients after previous attempts had failed. In three cases a cure was effected on the day following the hypnotic suggestion (suggestion *à échéance*). In one case dyskinesia amnestica remained unaffected even under deep hypnosis. Twelve patients could not be cured; ten of these were refractory against hypnosis. Only two became fully hypnotic. A cure was effected in those cases only in which the hysterical syndrome was acute. In those cases in which the development of the condition extended over days or weeks, a cure was effected correspondingly slowly. The duration of the hysterical syndrome and a neuropathic tendency on the part of the patient did not alter the prognosis. A cure was affected, even "rapid cures," in cases of from two to thirteen months' duration. Some of these patients were refractory to the treatment because of a desire not to return to active duty. Nonne cited five cases of stubborn generalized muscle tremor that yielded promptly to hypnotic suggestion. He shows that hypnosis is entirely independent of neuropathic tendencies, general exhaustion and the consequent reduction of resistance, nor did he find any difference in producing hypnosis among people coming from different parts of Germany, from the city or country, or in various walks of life. He frequently saw cases in which the subject yielded easily to hypnotic suggestion. Nonne says that in such cases it is advisable to give the suggestion to the patient that others do not possess the same hypnotic influence over him. Nonne cited four cases of this kind. As to recurrence, Nonne admits that many of these cured patients will have recurrence if they are subjected to the influence which produced the original attack. That the ordinary garrison duty or field service does not play any part in the production of recurrence was shown by six cases cited. Nonne calls attention to the advantages of hypnotic suggestion: 1. Cures are frequent and rapid. Nonne's patients had all been treated ineffectively for many months in various hospitals. 2. Hypnosis may be regarded as a means of differentiation between "organic" and "functional" cases. Nonne cites the case of an officer who received a grazing bullet wound of the left parietal region and developed a right-sided superior monoparesis with glovelike areas of disturbance of sensation of all kinds of hands and fingers, but normal tendon and periosteum reflexes and absence of hemiparalysis. In the hypnotic state sensation was normal, and after several treatments the patient was cured. 3. Cases of stubborn tremors and tics of long duration as well as severe vasomotor disturbances were promptly healed by suggestion, showing that these symptoms must have been purely functional. 4. Hypnosis would be of great value in determining the disability of the individual, the degree as well as the duration, so that he can be returned to duty if he is fit for duty. Nonne recognizes that difficulties lie in the way of the adoption of this procedure, particularly as time and patience are required, and the hypnotizer becomes fatigued rapidly and much more severely than does the hydrotherapist or the electrotherapist; nor can he rely on assistants.

Journal of Amer. med. assoc. 68: 1274, April 28, 1917. Lunacy and the War; Decrease in the Number of the Insane (London Letter)

The official report for the year 1915 states that, January 1, 1916, the number of notified insane persons under care in England and Wales was 137,188, being less than that recorded, January 1, 1915, by 3,278. This decrease may be contrasted with an increase of 2,411 recorded for the year 1914, and an average annual in-

crease for the ten years ended December 31, 1914, amounting to 2,251. Thus if that average rate had been maintained during 1915, the number under care, January 1, 1916, would have been 142,717, or 5,529 above the actual record. It is noteworthy that this is the first occasion since reliable statistics have been available (since 1859) on which there has been a decrease in the numbers under care as compared with those of the preceding year. Except in 1885, 1886 and 1890, when such increase amounted to 452, 735 and 728, respectively, the numbers have been nearer 2,000 than 1,000, and since 1893 above the former figure, in all but four years, a maximum yearly increase of 3,235 being recorded in 1904. It is natural, therefore, to infer that the diminution bears some relation to exceptional conditions—social and economic—arising from the war. The admissions during the year were 21,173, or 2,055 below the number recorded in 1914, and of these, 17,710 were first admissions being 547 below the decennial mean. The report suggests that as the decrease coincides with altered conditions arising from the war, an explanation might perhaps be found in a diminution of insanity owing (1) to the withdrawal from civil occupations of a large proportion of the male population; (2) in the great call for employment by both sexes alike, and (3) the increase in material prosperity afforded thereby. On the other hand, it is remarked that the direct and indirect effects of war in disturbing mental balance in those actively engaged in it, and the stress of anxiety and sorrow experienced by those at home are not to be ignored. These and certain other considerations, however, are regarded at this juncture as too speculative to be given much weight.

Journal of Amer. med. assoc. 64: 678–79, Feb. 20, 1915. Nervous and Mental Disease (Berlin Letter, Jan. 19, 1915)

The Berlin psychiatrist, Albert Moll, recently reported on the results of a tour for psychiatric study through the western theater of war, the hospitals of Northern France and Belgium. Altogether relatively few insane were found, while nervous disturbances appeared somewhat more frequently. Cases of imbecility were only rarely observed. The reason for this is, first, the better education in psychiatry of military surgeons, who immediately reject such patients, and second, the fact that the registers of the subsidiary schools for feebleminded and those of the insane asylums have been made accessible to the recruiting boards. A few cases of primary alcoholic insanity have been received in the special wards of the hospitals. Moll saw during his trip only two drunken soldiers. He holds the provision that complete abstinence be not required during the campaign to be fully justified, but regards it as desirable that presents of alcohol to the soldiers should be distributed by their superiors. In view of the sanitary conditions in France and Belgium and of the composition of the water that is available, the addition of wine to the water is required. In Liege, where a nervous department has been established in the hospital, only nineteen patients had been admitted up to the middle of November. Among these were three epileptics, three cases of anxiety neurosis and six of alcohol psychosis. This is a small number considering the large number of soldiers who are stationed in that neighborhood or pass through it. In Brussels, 120 patients were treated in the department, of whom, however, a great number were affected with organic nervous diseases, such as shot wounds of the nerves or cases of apoplexy, and also five cases of primary alcoholic insanity, thirteen of paralysis, seventeen of epilepsy and seventeen of hysteria. In a large army hospital in the neighborhood of Argonne that received a very large number of soldiers, only ten or twelve cases of insanity were observed by a psychiatrist who had seen all the patients. Cases of exhaustion psychosis have been observed, as they were in the Russo-Japanese War. Moll, however, would include these with hysteria rather than genuine insanity. Diagnosis is difficult in the field where any sort of history is lacking, and also it is difficult to decide where the treatment of cases of insanity can best be carried on. Transportation home is best secured in separate departments of the hospital train which are provided with specially trained nurses.

Journal of Amer. med. assoc. 65: 2102, Dec. 11, 1915. Nervous Affections Caused by Bursting of Shells (Paris Letter, Nov. 18, 1915)

At a recent session of the Réunion médico-chirurgicale de la X-e armée, Drs. Gustave Russy and J. Boisseau read an interesting paper on this subject, based on sixty-seven cases of nervous affections provoked by bombardment. The conditions in which these disturbances occur are always the same; bursting of a shell of large caliber near by, killing or wounding neighboring comrades, more or less prolonged loss of consciousness, followed by an outbreak of nervous disturbances. The latter may be grouped in three classes:

1. Disturbances of hearing and speech (deafness, loss of speech, deafmutism, stammering). The patients sometimes present an expression of terror and mental confusion, sometimes an impassive and stupefied countenance, sometimes an expressive mimicry, gesticulating, pointing to their ears, demanding to write.

2. Various nervous complications, such as trembling, convulsive crises, astasia, paraplegia, etc.

3. Mental disturbances such as confusion with stupor and delirious ideas.

Somatic signs sometimes observed are a very slight and temporary elevation of temperature with often persistent headache. In eleven out of sixteen cases of deafness, examination revealed the presence of small lesions, generally old, sometimes recent. In seventeen out of nineteen cases examination of the cerebrospinal fluid gave negative results (generally the fluid trickled drop by drop; there was no hyperalbuminosis or lymphocytosis); in two cases there were positive results (slight hyperalbuminosis in one, slight lymphocytosis in the other). The two patients presented mental confusion and the second had albuminuria.

Cure always followed the treatment, immediately (that is, within a day) or tardily (within two or three days in the intense forms).

The complications presented in the sixty-seven cases could all be classified as functional or hysterotraumatic. There are no signs which give reason to suspect a disturbance of the central nervous system, no reflex trouble, no chemical or cytologic modification of the cerebrospinal fluid. All the symptoms disappeared very rapidly under suggestion. The ease and rapidity of cure of these patients treated at a date very near the onset of the condition contrasts singularly with the slowness and even the failures observed in the zone of the interior. There would appear to be considerable practical value in early treatment from the military point of view.

Journal of Amer. med. assoc. 66: 1635, May 20, 1916. Nervous Disorders (London Letter, May 1, 1916)

Nervous disorders due to the shock and strain of bombardment are conditions which cannot be affected by hygienic precautions. With the modern development of big guns and high explosives, shell-shock has become frequent. A committee has been appointed to investigate the subject in co-operation with the leading French neurologists. The cases have shown great divergence from the disorders observed in civil life. When exposed to concussion of a high explosive, a variety of symptoms may be produced. All consciousness of the explosion may be obliterated, or the soldier may simply become dazed, and afterward his conduct may be "curious" and his actions indeterminate. For these conditions the only treatment is rest. After a heavy bombardment a healthy man may break down, and if removed to a place of safety, collapse and fall asleep in spite of the noise that is going on. Some men then recover, but others cannot support noise for a long time. They show overreaction to noise. A cab whistle or an exploding tire outside a convalescent home will bring some patients from their beds. In another group a condition of nervous irritability rather than exhaustion is produced. Thus continuous shelling, even though it produces few casualties, has a wearing down effect. In men with a stable ner-

vous system the effect is temporary, but it is not so in those with neurotic tendencies. Hence our neurologists who are familiar with the nervous systems of our men and our enemies predict that the imperturbable British temperament will confer an advantage in the coming struggle.

Journal of Amer. med. assoc. 65: 2180–81, Dec. 18, 1915. Nervous Symptoms in Wounded Patients (Paris Letter, Nov. 25, 1915)

The Société de neurologie de Paris recently held two extraordinary sessions. under the presidency of Prof. Gilbert Ballet, to study the methods of clinical examination and the course to be pursued in cases in which exaggeration or simulation of certain nervous symptoms is suspected in wounded patients. The medical service had convoked the heads of all the military neurologic centers to take part in these sessions. Such a meeting had been much desired by French neurologists who for a year had to treat wounded patients with nervous symptoms. The opportunity to exchange scientific and practical opinions on the subject created much interest. At the end of the session, the society passed the following resolutions, which were transmitted to the medical service:

1. In each of the armies, neurologic and psychiatric centers, such as already exist in several of them, should be formed. In such centers all patients affected with nervous and mental conditions and all those suspected of simulation or exaggeration should be examined. The purpose should be, on the one hand, to recognize, before they are removed to the special centers of the interior, the patients affected with lasting organic lesions, and on the other hand to avoid the removal to the rear of patients suspected of simulation and exaggeration or affected with nonorganic conditions, which can be recognized, treated and cured very rapidly in the zones of the armies, as appears from results already obtained in existing centers (The Journal, Dec. 11, 1915, p. 2102).

2. Soldiers suspected of simulation or exaggeration or of voluntarily prolonging their nervous troubles should be sent to special services where they can be under competent medical oversight and severe military discipline at the same time. Experience has shown the value of such measures in certain neurologic centers where they have been applied. It would be desirable that such special services be attached to the military neurologic centers already existing, if the heads of these centers are able to operate them.

3. The opinions of the physicians of the neurologic centers with regard to a soldier dismissed by them should be taken into account wherever the soldier may go.

4. Under no circumstances, at present, should soldiers affected with psychoneuroses be sent for discharge to the committees that arrange discharges.

5. In view of the great number of diagnostic errors in cases of wounded men with nervous symptoms, it would be desirable that in each region, or group of regions, neurologic experts should regularly visit all hospitals and other places where patients are under treatment. These experts should make notes on each neurologic case for the information of the committees that arrange discharges and to enable the attending physicians to form an opinion of the propriety of sending the soldiers back to service or to one of the neurologic centers.

6. In view of the delicate scientific and practical problems which daily present themselves with regard to soldiers in neurologic hospitals, it would be desirable that the heads of the neurologic centers should have the opportunity to meet from time to time in order to co-ordinate their efforts to render the course of action uniform.

M. Justin Godart, under-secretary of the military medical service, informed the Société de neurologie de Paris that he was forwarding to the director-general of the medical service of the armies, with his approval, the resolutions passed by the society. Experience has shown, he said, the justification for forming neurologic psychiatric centers in each of the armies. So far as the second resolution is concerned, it would be simple to form, instead of special services, departments annexed to the neurologic centers operating under competent medical direction and with a more severe discipline. Resolutions 3, 4 and 5 have his unqualified

approval. As for Resolution 6, M. Godart is ready to approve the meetings requested provided they are not too frequent.

Journal of Amer. med. assoc. 64: 1340–41, April 17, 1915. Nervous Troubles Among the Wounded (Paris Letter, Mar. 25, 1915)

The Société de neurologie de Paris has sent the minister of war a letter calling attention to the fact that men affected with nervous troubles are ordinarily sent to the special neurologic services too late. To take examples from among the most common wounds of war, in cases of lesions of the nerves by balls or fragments of shell, which are very numerous, it is essential that the possibility of operation and its character should be determined as soon as possible. This is a point which cannot be decided without a very minute neurologic examination, requiring not only particular training but also the use of instruments with which most ambulances are not provided. Among the greater number of patients affected with traumatic neuritis and sent to the neurologic services long after the onset of the symptoms, fibrotendinous retractions and subankyloses have developed and persisted in spite of treatment and in some cases have been incurable. Especially to be deprecated is the prolonged sojourn in unsuitable environments of patients affected with hysteric troubles—hystero-traumatism, traumatic neuroses and troubles due to suggestion. Then there are also the simulators who can be best distinguished by a neurologist. Observation shows that hysteric disorders disappear very rapidly when they are properly diagnosed and treated by psychotherapy and countersuggestion at their inception. They may, on the other hand, be very refractory to treatment when, having been wrongly diagnosed at first they have been fostered by the sympathy of companions, etc. There is no exaggeration in saying that there are now in the ambulances and military hospitals thousands of men of this class who, if properly treated, should have been able to return to their posts of duty long since.

Therefore the Société de neurologie de Paris believes that all patients who are or appear to be affected with nervous troubles, organic or non-organic, ought to be sent, as soon as possible, to the neurologic services. Moreover, for those patients whose abnormal condition persists in spite of treatment and in whom exaggeration or simulation may be suspected, special services for medical oversight and discipline should be organized.

Journal of Amer. med. assoc. 66: 1398, April 29, 1916. Psychic Disturbances Incident to the War (Berlin Letter, March 28, 1916)

Shortly after the beginning of the war a neutral European periodical, the *Telegraph*, of Holland, published a statement, credited to a French psychiatrist, that since the beginning of the war 750,000 German soldiers and 1,600,000 civilians had become insane. Professor Bonhoeffer, the Berlin psychiatrist, made an investigation of this subject. He found that the war cannot be held responsible for any particular psychic disturbance. In fact, the same types of mental diseases are prevailing now as in times of peace, nor is there any change in the syndrome of any psychic disorder. The usual type of psychic disturbances, that is, dementia praecox and the manic depressive insanities, are encountered in their usual form. Of course, there is bound to be some difference in the clinical history of these diseases because of the fact that these patients live in a different environment; but this cannot be held responsible for the creation of a different type of disease. Nor do these disturbances occur more frequently now than during times of peace. These facts throw an entirely new light on the etiology of mental diseases, because if exhaustion, lack of sleep and emotional disturbances really play the role in the production of these diseases that has been credited to them, then they ought to occur more frequently at the front during war time than at home during times of peace. Still this is not the case. In fact, we are informed by the psychiatrists at the front that, while the exhausting marches, the comparatively poor housing and the constant exposure to the shock of exploding shells are productive of nervous disturbances, a real psychosis has not

been developed. Neither is it believed that life at the front will predispose to the development of psychic disturbances later on.

The Psychopath

Of course, the so-called psychopath, the subnormal individual, probably is an exception in that he is more exposed to conditions which may early break down the sensitive borderline between the normal and the subnormal. These persons, however, also form a distinctive group in ordinary civil life and break down quickly under unusual mental strains. Therefore, the war can hardly be held responsible for the production of a condition which already exists. It has been shown that the majority of the psychic nervous disturbances encountered since the beginning of the war have occurred among these individuals. The clinical manifestation is usually a variation in temperament, paralyses, spastic conditions, peculiar forms of delirium and loss of memory sense. In fact, the picture is recognized as being of the hysterical type, and every form of hysteria is seen just as it occurs in times of peace. Hence, one cannot speak with propriety of war psychoses. The war merely causes these cases to occur earlier and more frequently, although under ordinary conditions some of these persons might have escaped the psychic breakdown. It has been the aim of the military authorities not to permit the psychopath to enlist for service, but naturally many difficulties are met in attempting to determine who is and who is not a psychopath because of the very slight differentiation that may exist between the normal and the subnormal. In the case of many psychopaths the condition is not recognized until the man has seen service, and furthermore, many psychopaths render good service without any or only slight psychic disturbances. Military service has helped some psychopaths to overcome the deficiency. Their disturbed, easily excited mentality has prompted them to enlist for service as volunteers; the strain of such service has helped them to forget their mental shortcomings, and they have been molded into good soldiers. Certain types of psychopaths, the adventurer, the youthful transgressor, the boy who has fought school discipline, the young man who has come into conflict with the police, who has fought law and order, often finds himself entirely at home and at peace with the law and himself when he sees service at the front. Many incorrigibles who have been enlisted from institutions have made splendid soldiers. Thus it will be seen that the psychopaths cannot be and should not be prohibited from entering on military service. Often the most careful selection is bound to be followed by a certain number of cases of psychic and nervous disturbances in psychopaths. Just how great this number will be cannot be stated at this time. The individual experiences of the psychiatrists at the front lead one to believe that the number is not very great. They report that their services have not been called for to treat psychic disturbances, and there has been no demand for the establishment of special so-called psychic stations at the front as was the case in the Russo-Japanese War.

Kay, A. G. Insanity in the Army During Peace and War and Its Treatment. J. of Royal army med. corps 18: 146–58, Feb. 1912

The author says that until recently nervous and mental diseases in the army have received very little recognition in England, but the apparent increase of these conditions makes the subject deserving of special study. In France and Germany statistics show that there has been a continuous increase in mental diseases in the army for the last ten years, the incidence at present being alarming. In England, also, statistics show an increase, though not quite to the same extent. Part of this increase is apparent and appears to be due to better methods of recognizing cases on the border line.

In the French Army among the infantry the disturbances most frequently observed are psychoses synchronizing with attacks of mental exhaustion. The sudden change from comparative comfort to an existence imbued with all the rigors of military discipline, not to mention the exactions incident to enforced mental and physical exertion, entails something more than the ordinary soldier

possesses, namely, the sort of adaptability associated only with men who are habitually in possession of normal intellectuality. One can readily see that since the individuality of the ordinary soldier is none too strong, he will not be long in manifesting insanity, should there be a predisposition to cerebral disturbance—a deplorable condition that is brought on partly by the officers in charge of regiments who seem to see in his lack of ability to submit to stringent military rules only what is perverse in human nature that must be corrected by increased discipline. This stubbornness is held responsible for insubordination, and disregard of military rules, for open rebellion, when mental disease should be regarded as the prime cause.

The Army Medical Report of the British army for 1908 gives the following figures: Total number of recruits inspected, 61,278. Rejected for weakness of intellect: (1) On inspection 54, equal to 0.88 per 1,000 inspected; (2) Three months after enlistment, 71, equal to 1.16 per 1,000 inspected.

The forms of insanity most prevalent in the British army are melancholia, mania, and the delusional types; very few cases of general paralysis of the insane occur, although there is always a large amount of syphilis and its sequelae. The short-service system would partially explain the comparative infrequency of this particular form, but the author also thinks the more effectual methods of treating syphilis would account for the absence of general paralysis of the insane perhaps better than any other reason.

British medical officers examining recruits are bound by regulations to test the mental capacity of every recruit before enlistment. This is done by directing attention particularly to mental alertness, and to signs of degeneracy, epilepsy, and all forms of nervous instability, or any other condition likely to produce mental weakness. In this way, so far as medical skill can prognosticate, the psychically weak are eliminated.

Insanity is invariably increased as the result of war. The prevailing types of the disease are the depressive and delusional forms.

Regarding the effect of a campaign on mental diseases, the experiences of the Russo-Japanese War have furnished valuable information. It is worthy of note that this was the first time in which mental diseases were separately cared for by specialists from the firing line back to the home country. The experiences of the Japanese side have not yet been published. The Russian experiences have, however, been fully reported.

Steida (*Centralblatt fur Nervenheil und Psychologie*, 1906) says that battle as a psychic trauma is not alone sufficient to cause a psychosis. The most immediate results of battles are hysterial excitement and confused states. These usually clear up within a few days, but irritability, fearfulness and emotional instability remain for weeks. He lays as much weight upon the prolonged exertion, the deprivations, the loss of sleep, hunger and thirst as upon the psychic trauma of battle. Among the Russian officers there was a high percentage of alcoholic psychosis, and also neurasthenic and hysterical conditions. Wagner (*Militararztliche Zeitschrift*, 1908) describes many cases of hysterial fright with great excitement and confusion, ending finally in a semi-conscious state with great mental and bodily weakness. The lack of complete examination of officers and men before going to the front greatly increased the number of mental cases. Prof. Autokratow personally saw officers in the early stages of paresis and with arteriosclerosis going to the front, only to be returned in a few months with more active manifestations of their ailments.—Mil. surg. 30: 457–59, April 1912.

King, Edgar. Mental Disease and Defect in U. S. Troops. Bull. no. 5, Surg. Gen. Office, War Dept.

This is a rather comprehensive work and is the result of the experience of the writer during over two years' detail at the Government Hospital for the Insane. It includes not only a valuable consideration of psychiatric literature, but also pertinent conclusions which will surely prove of value. The reader will be impressed with the pervading dogmatic tone. However, this is permissible and perhaps desirable, as the bulletin is intended for medical officers, and particu-

larly those on recruiting duty, most of whom have no special interest or knowledge of the subject. These will find it of good utility and practically all meat.

In the introduction attention is called to the importance of the problem of mental diseases from a military viewpoint. In 1912 the percentage of disability discharges for mental alienation was twenty per cent, the discharge rate per 1,000 being 264, which is higher than any other cause. That is, 200 men were found mentally incapacitated, which figures would be increased if hysteria and neurasthenia were included.

Particular emphasis is laid upon dementia praecox, because more than half of the army admissions for mental disease were of this form. No doubt many of the desertions and those discharged as undesirable were of this class.

After considering the history and nature of the disease the cause is taken up, emphasizing the fact that the age involved is that of the likely recruit and that 70 per cent of cases show a hereditary taint.

In the course, symptomatology, and prognosis the writer closely follows the Kraepelinian teachings. The fact is noted that the praecox process may be present and producing changes in the mental life and character and conduct of an individual months or years before the disease becomes frankly manifest. This accounts for soldiers who persist in repeated alcoholism, those who desert without apparent cause and shortly afterwards fraudulently re-enlist even though aware of the certainty of punishment, the practical failure, those unable to "get along," the persistent sexual debauchees, the inadequate and inefficient. Numerous characteristically descriptive cases are cited under the various forms of praecox, the hebephrenic, catatonic, paranoid, and mixed.

Under manic depressive psychosis it is noted that this is a comparatively rare disease in the service. This entity is traced in the fluctuations, according to different authors, from the all-inclusive idea of Kahlbaum to the more limited one held at present.

Points noted are the usually hereditary cause; that attacks often occur without apparent reason; not to regard the disease as "line of duty" without carefully searching the history for previous attacks. The excitements of praecox are frequently mistaken for this condition.

The best test of recovery is insight. All cases realize that they have been insane, thus differing from praecox. Recovered cases should not be returned to the service.

Paranoid states are a frequent occurrence in service cases. It is concluded that 5 to 8 per cent are paranoid praecox and that none recover, and that a paranoid picture may be present in other forms of psychosis.

General paresis, next to dementia praecox, is the most common mental disease in the military service. It is sharply defined clinically and is easily diagnosed by the laboratory findings. It is suggested that all cases be thoroughly examined physically and neurologically as well as mentally to avoid error.

Precautionary measures should be taken to prevent the enlisting of syphilitics. The intensive treatment of those in the service and the risk of allowing these potentially insane men on duty, particularly in war time, when the onset of paresis may cause disability, are emphasized.

In cerebral lues no one type of mental picture occurs regularly. There may be simple deterioration, paranoid states, excitements or depressions, a paretic-like condition or a neurasthenic picture, and this latter is an important condition.

The mental impairment associated with arteriosclerosis is emphasized. Alcohol is considered the important factor in producing the vessel change. There are failure of interest and loss of productivity, which are serious in an officer holding an important command. The power of comprehension is lessened; they are easily fatigued mentally, and there is irritability and depression. Not a few officers become mentally inefficient from arteriosclerosis before the age of retirement. They are practically certain to break down under any stress of service.

In the chapter upon "Exclusion of the imbecile and moron from the army" attention is called to the necessity of a correct life history and the connection between the stigmata of degeneration and deficient mental powers. Waiving

of physical defects in applicants for enlistment is risky. It is better to keep close to the normal standard.

The writer suggests that it would be advisable at the recruiting depot to send all men who do not do as well as the average in their routine work to the surgeon for mental examination, so that it may be definitely determined whether it is advisable to expend further time and money upon them.

Under the heading of psychopathic make-up is considered a class of individuals who cause the service lots of trouble. They can not cope with the world except in their own peculiar way. They are useless in the regular service, as they are unable to adjust themselves to the discipline. They are persistently insubordinate, excessive in and intolerant to alcohol, and are likely to be addicted to sexual perversion. This type is liable to develop a psychosis, when they are unable to escape by desertion, conditions to which they can not adapt themselves.

It is suggested that court-martial offenders be examined mentally so as to avoid returning to duty those of abnormal mental make-up, in whom this factor was, no doubt, the cause of their offense.

It is not always true that an offender who is able to behave well during his stay at a disciplinary barracks is fit to return to the service. A great number do well under the conditions in such an institution or on probation, but soon lapse when placed on their own responsibility and subjected to alcoholic and accompanying temptations.

In considering borderline cases it is stated that if a soldier or officer reacts habitually in an abnormal manner to events in his daily life to such an extent as to make him relatively useless, perhaps obnoxious or dangerous, or not to be trusted, and at all events entirely unsuited for military service, and no frank mental condition is found, and assuming that he is proof against admonition, and that endeavors to teach him to behave in a normal manner are unsuccessful; that rebuke, reprimand, company discipline, and punishment by court-martial only temporarily or not at all improve his mode of reaction to his surroundings, it will probably be found in a careful history of his life that he has always reacted abnormally, and that the cause of his military and civil inefficiency is constitutional, and that he should be discharged on a surgeon's certificate of disability, not in line of duty.

In the concluding chapter the author sums up and emphasizes certain points, such as the difficulty of classification, the paramount importance of dementia praecox, which group included 40 per cent or more of admissions here from the military service, and the rarity of manic depressive psychoses. He prefers the use of the terms "depression" and "excitement undifferentiated" to the older terms "mania" and "melancholia," and the same applies to "psychosis undifferentiated." He states that true paranoia is very rare, but that paranoid disease pictures are not infrequent, and the most of these belong to the praecox group. Where alcohol is a causative factor he believes it desirable to report such cases as "psychosis associated with alcoholism," thus emphasizing the alcoholic factor, and if the psychotic state be due to cocain, morphin, etc., a similar form of diagnosis makes the case clear.

As this publication is easily obtainable it would well repay reading the original. —R. Sheehan, U. S. naval med. bull. 8:685–88, Oct. 1914.

King, Edgar. The Military Delinquent. Mil. surg. 37: 574–78, Dec. 1915

"During the fiscal years 1908–1913 inclusive, the total number of enlistment contracts in force, according to figures obtained from the Adjutant General of the Army, was about 250,704. Of this number not less than 30,000 were terminated by the soldier becoming a military delinquent. This is twelve per cent of the total. A very large percentage of these men deserted the service, the number of desertions reported during the period under consideration being slightly in excess of 23,000."

Capt. King made a study of 1,000 general prisoners as to causes of their delinquency. Results are given in the following table:

Cause	Number	Percentage
Dementia praecox (1)	25	2.5
Manic depressive psychosis	1	0.1
Cerebral syphilis	4	0.4
Epilepsy (2)	16	1.6
Morons	13	1.3
Drug habit	10	1.0
Psychopathic constitution	200	20.0
Constitutionally inferior	70	7.0
Acute alcoholism	70	7.0
Habitual drunkenness (3) existing prior to enlistment	70	17.0
Chronic alcoholics (3)	40	4.0
Periodical alcoholics	15	1.5
Youth (usually in association with other factors)	80	8.0
Relatives	30	3.0
Women	30	3.0
Miscellaneous	226	22.6
Total	1,000	100.0

(1) In 7 cases diagnosis not absolute but entirely probable.
(2) In 7 cases diagnosis not absolute but entirely probable.
(3) In over 90 per cent, condition existed prior to enlistment.

Captain King makes the following suggestions for reducing military delinquency:

1. Increased knowledge among medical officers and officers of the line as to causes of military delinquency.
2. Increased efficiency of the recruiting system so that the unfit are eliminated at the time of enlistment.
3. Use of best efforts on the part of medical officers to reduce the tremendous amount of intemperance at present existing in the army. Most of the cases of alcoholism began their excesses prior to enlistment.

McDowell, R. W. Diseases incident to submarine duty. U. S. naval med. bull. 11:49, Jan. 1917

Nervous complaints are numerous and varied. While seasickness is rare on the battleships it is not uncommon in the submarine service. It is not considered as disgraceful on a submarine as it is on a battleship. When one considers that these 300-ton boats go to sea in all kinds of weather it is not surprising that there should occur occasionally a case of seasickness. All hatches must be battened down even when running on the surface, except in the very smoothest water, and the lack of fresh air is also a causative factor. The men who can stay on deck rarely become seasick.

Nostalgia and neurasthenia are occasionally seen in men whose nervous systems are not strong enough to withstand the hardships of the arduous duty with the submarines.

The writer has seen two cases of claustrophobia in the submarine service in the past two years. In each case the man was seized with the most uncontrollable terror of the closed space when the boat was being submerged. The mental suffering and anguish of these cases is pitiable. One case which I very carefully studied recently was that of a man who had a splendid service record, had been in

the navy for over eight years, most of it on the battleships and destroyers, was an able machinist, and certainly not a physical or a moral coward. When he went out on the submarine for a drive he would begin to show signs of restlessness as soon as the boat shoved off from the dock, and as the boat began to submerge he exhibited signs of fear which he tried manfully to control. Perspiration ran from him, his pulse jumped to 150 or 160 per minute, his pupils dilated, respiration became rapid, and he became so excited and confused that not only was he not to be depended upon, but was actually a dangerous man in the boat. Once he lapsed into unconsciousness.

He was at first encouraged by mental suggestions and all hands tried to stimulate him and keep his thoughts on other things, but without result, and he would feel this terrible oppression coming over him. He could not get enough air and his "throat closed up" and his "lungs felt as if they were being squeezed in a vise." The treatment was of no avail and he was transferred from the submarine duty to a battleship, where he has been in good health. When these cases are transferred to a large ship they invariably and immediately improve.

McMullin, J. J. A. Some Observations on the Examination of Recruits: Defective Minds. U. S. naval med. bull. 9:73–74, Jan. 1915

"During the spring of 1912, while temporarily attached to the naval prison, Portsmouth, N. H., I applied a modification of the Binet test to some of the prisoners, and was surprised to find that the majority of those examined seemed to be defective." Many of these might have been excluded from the service if appropriate tests had been applied at the recruiting station.

"Only the grossest types of insanity can be discovered during a short examination conducted by one untrained in psychiatry." Sometimes alienists find it necessary to study certain cases some months before giving an opinion. Hence tests based on the Binet method can only help to solve the problem of ridding the navy of undesirables. But an incomplete examination is better than none, and it is too much to expect any test to be unfailing in results.

The writer then describes briefly the test applied to applicants at Portsmouth.

Med. rec. 90: 374, Aug. 26, 1916. Functional Psychic Disturbances in the Light of War (Editorial)

Psychiatrical problems receive their share of enlightenment from the vast laboratory the war has thrown open to medical science. Neuropathology and psychopathology are the subjects of much attention and discussion. Thus it comes to pass that modern theories in regard to the relation of psychic trauma and psychopathic predisposition are being distinctly advanced.

The observations made by Dr. Lewellys F. Barker in his presidential address delivered before the American Neurological Association in May, 1916, printed in full in the *Journal of Nervous and Mental Disease* for July, and in abstract in the *Medical Record* of July 29, are confirmed by reports from the front, a number of which are published in abstract in the *Review of Neurology and Psychiatry* for May, 1916. There is an agreement of opinion that a distinction can assuredly be made between the psychotic or the psychoneurotic disturbances arising as the result of battle shock and that which is complicated by a psychopathic tendency, which only awaits, in order to become active, such extreme conditions and such excessive and untoward demands for adaptation as the exigencies of war present. Sudden and violent abnormalities in reaction are inevitable. Their occurrence, however, in no way denies the importance to be attached to the unconscious mental life in the production of mental disturbances. It does not argue for the current inflexible conception of pathological causes which attribute such phenomena always to the immediate traumatic agent.

It is noteworthy that these disturbances of mental equilibrium, inevitably induced and violent though they may be in character, are easily amenable to a wise therapy. The factor of chief significance in the consideration of the genetic

theory of the functional neuroses and psychoses is the appearance and perhaps persistence of accompanying mental phenomena which seem to be aroused by the immediate traumatic outbreak and to follow in its train. Testimony points generally in this direction, that it is with the man who furnishes the fruitful soil, neuropathic or psychopathic, in whom these sequelae are observed. The precipitating cause applies the spark to the unconscious material. The actual emotional importance of the immediate trauma manifests itself in the terrifying nature of the dreams of actual war experience. These, however, are transient phenomena. There are blended with these dreams, Dr. Bruce reports, quoting from the *Lancet*, "episodes utterly alien to the war" and events "in the patient's past history, the revivified emotions associated with which the war incidents have served to awaken, by stirring up similar emotions." One might expect some experience of horror to usurp consciousness and even to build up a permanent delusional system, which does happen at times unless an interpretative therapy comes to the rescue. Nevertheless, the deep-laid emotional experiences and sentiments which make up the personality, chiefly through the unconscious, by their self-assertion in the face of such crises, witness to the measure of their importance and reality.

The psychotherapy of the battlefields and hospitals is permeated with the modern comprehensive viewpoint and conditions there are met in the spirit which takes into account the whole psychical history, recognizes the remote contributing causes and believes in the value of the interpretative attitude toward the patient himself and in his psychic re-education. It is striking to note in passing how frequently hypnosis is condemned as inadequate or actually deleterious. It is also of interest to observe how the demands of reality operate under war conditions to bring the patient back to his normal state, particularly in the acute transient conditions without the psychopathic background. This serves as an intensified illustration of the fundamental principle of psychoanalytic therapy. It is a radical application of the "reality principle" as the royal road to psychic health, a reality specially urgent and particularly effective amid the necessities of war.

Much of interest and much of value is thus afforded in the knowledge of mental disturbances, in the borderland cases as in the distinctively neurotic or pronounced psychotic conditions, and much is being added to the effectiveness of psychotherapy along these lines.

Med. rec. 85:622, April 4, 1914. Psychiatry and Certain Military Problems (Editorial)

The importance of psychiatry in medicine is beginning to be recognized and in consequence its study is being promoted in all medical schools. In most modern hospitals opportunities are provided for the clinical study of psychiatry, for it is felt that in these days when degeneracy appears to be rife it is essential that as much as is possible should be learned of the subject. In a lecture delivered at the summer conference, 1913, of the U. S. Naval War College, by Dr. W. A. White, it was pointed out that psychiatry and the military medical service were intimately related, that is, psychiatry was of great importance to the military service, in so far as by its means the enlistment of defectives might be prevented to a very large extent. White is of the opinion that it is a popular delusion that the ne'er-do-well, the black sheep of the family, will be picked up and made a man of by the discipline of military life. According to his views quite the contrary is the case. The ne'er-do-well is so because he lacks the ability of continuous application, and when he is subjected to the rigid discipline of the military organization, he of necessity endeavors to slip from under the weight of his responsibilities and duties and thus begins that series of minor infractions of military regulation which frequently ends so disastrously.

Mental breakdowns are very apt to occur in war time, and if the subject has certain latent tendencies they will be brought to light by the stress and exigencies of war conditions. For instance, it has been demonstrated that in such circumstances there is an increase in the number of alcoholic psychoses, an increase in

the number of psychoses due to syphilis, and an increase in the psychosis of metasyphilitic paresis. Persons with these tendencies are more prone to break down in war time than in the time of peace, and therefore are not fitted to be soldiers. A knowledge of psychiatry would come in good stead to eliminate these unfit from the military standpoint. That an individual with an alcoholic psychosis is not fitted for a soldier's life, at any rate in war time, is self evident, but White shows from the experience gained in the Russo-Japanese war that the syphilitic psychosis is likewise of the first importance. At the Russian Psychiatric Hospital at Harbin, during the war, the percentage of paresis among those brought back from the front was 5.6. Undoubtedly its development was hastened by war conditions and this clearly shows the influence of these conditions upon those who have syphilis.

After discussing temperamental fitness and character the author comes to eugenics and thinks that it would be interesting to construct family charts to see what are the hereditary probabilities in different individuals. Such charts might be considered at the time of admission to the naval academy, and if out of a number of applicants there were in a certain proportion marked hereditary tendencies which might very well come to expression in the particular individual under consideration, perhaps it would be better to put him aside for one with a clearer family record.

In concluding the paper some suggestions were made. In the first place data which are being collected might perhaps present some evidence to a person psychologically trained that they would not present to a person without that training. A psychological analysis of some of the great generals is possible from the literature that exists regarding them. Field work, too, in psychology is possible; and lastly White suggests the readjustment of the service so that men will come into positions of command well before the arteriosclerotic period and the elimination from promotion to higher grades of alcoholics and syphilitics.

Med. rec. 90:109, July 15, 1916. Psychiatric Treatment of Soldiers (Editorial)

There seems to be a certain amount of conflict of opinion as to the effect on the nervous system of soldiers fighting in Europe, of the unprecedented conditions of warfare existing there. It was freely predicted at the outset of the war that the present generation of young men and especially of those of England and France whose vital energies were said to be sapped by city life and self-indulgence would inevitably break down under the fearful strain of war. The conditions of war have been worse than anticipated and it appears on the whole that the fighting men have borne up very well under them. Some say that affections of the nervous system have been infrequent, while others declare that a large proportion of soldiers are incapacitated by such disorders. Perhaps the truth lies in the mean.

In a special bulletin issued in April, 1916, by the Military Commission of Canada, Dr. C. R. Clarke of Toronto discusses the psychiatric treatment of soldiers. According to this authority, the question of caring for returned soldiers suffering from mental and nervous troubles has engaged the attention of the Canadian medical profession in a marked way since the actions of last year. He points out that new conditions have arisen since the use of high explosives and the mental strain during action seems to be of the most severe character, with the result that numerous such cases are encountered requiring special treatment.

With regard to the manner in which such patients should be treated, the writer emphasizes the fact that neither convalescent homes, general hospitals, private houses, nor asylums are appropriate places in which treatment may be carried out. As convalescent homes and general hospitals are obviously unsuitable for the treatment of these cases, under the present conditions cases of marked mental trouble, although curable in the majority of instances, have to be sent to asylums. Of course, this is most unfair and, in a manner of speaking, a tragedy, for not only does it place upon the men the stigma of being certified inmates of a hospital for the insane, but perhaps in the majority of cases it pre-

cludes the possibility of successful treatment. In the large proportion of cases proper and intelligent treatment will cure, while it is equally as obvious that unintelligent and careless treatment will tend to aggravate the mental state, and life in an asylum is apt to have the most dire results.

As Clarke says, modern methods demand that recent cases of mental disease should receive just the same attention that cases in a general hospital secure. What should be done is to acquire a house of suitable structure which will afford accommodation for a certain number of patients. The necessary staff is best lodged in a separate building. This hospital should be equipped with the most modern scientific, hydrotherapeutic, and electric apparatus demanded in the care of such patients, and especially should the medical attendants be men who have been well trained in the diagnosis and treatment of mental disorders. This, after all, is the most important point. If a correct diagnosis be not made, the patient will not be treated as he should be treated, and a medical man to be able to make a correct diagnosis must be an expert. Also nurses should be specially qualified and should be women of the highest type, as on the sensible nursing of psychiatric patients the outcome largely depends.

During recent years it has been increasingly evident that in order to treat mental disorders intelligently new methods must be devised. Some men are peculiarly fitted by temperament and order of brain to deal with such cases, and these men should be rendered as skillful as possible by long training. We are now on the eve of managing mental affections in a sensible manner, and the war in Europe will, it is to be hoped, tend to develop a really scientific system of differentiating between the various kinds of mental aberrations and of treating each kind on its merits, or rather in the way that its peculiarities call for.

Med. rec. 87:527, March 27, 1915. War Psychoses (Editorial Note)

Much has been written on this subject since the outbreak of the present war, but after all nothing has been unearthed in this relation which has not always obtained in connection with warfare and other catastrophes, like earthquakes. At a recent (January 2) session of the military medical evenings of the Fifth Army (*Münchener medizinische Wochenschrift*, February 9), Singer spoke as follows: "Nearly all soldiers who 'become insane' in wartime are already mentally ill when enrolled. Psychopaths, hystericals—even manic-depressives—get into the ranks. Certain elements work on the psyche at a later date—enthusiasm, rumors, spy fear, etc. The hardships of war cause in psychopathic personalities depressions, neurasthenia, amentia, acute hallucinations. The prognosis here is good. With certain predisposition, shell fire will call forth a fright psychosis. Abstinence from alcohol exerts a favorable influence over war psychoses, and conversely small doses of alcohol in warfare act in excess and cause delirium, convulsions, etc." In discussion Weyert emphasized the fact that in warfare neurasthenics suffer especially from homesickness. Contrariwise the effects of war on some of the subjects have been pronounced salutary by the same author. Von Hecker believes that warfare accelerates the course of paresis.

Morselli, Arturo. War Psychiatry. Paper presented at a meeting of the Royal Medical Academy of Genoa

At a meeting of the Royal Medical Academy of Genoa, Arturo Morselli, consulting neurologist to the First Army of Italy, presented a communication on war psychiatry which he called a new chapter in mental pathology. He excluded from his purview all the common forms of psychosis which the circumstances of warfare had forced from a condition of latency into active development, and those such as alcoholism, epilepsy and dementia praecox, which had already existed when the patients were mobilized. Dealing only with mental aberrations due directly to the war, he said these mostly occurred in an acute form; they were brought on by the emotional excitement of battle, and, in his experience, had a basis of asthenia. He divided them into seven groups: (1) Acute nervous asthenia, mostly in the form of neurasthenia and psychasthenia; (2) hysteria, of which there were many varieties manifesting themselves in dumbness, stammer-

ing, tremor, paralysis, convulsions, catalepsy or somnambulism; (3) depression, showing itself sometimes as simple sadness, at others as delirium with ideas of suicide; (4) stupor, sometimes simple, sometimes accompanied by catatonic phenomena recalling those of dementia praecox; (5) hallucinations, coming on in a transient form after emotion; (6) confusional states, having the characters of amentia; (7) in rare cases, maniacal excitement. All forms of war psychosis in the strict sense are, in Morselli's experience, curable within a short period if treated early; it is important, therefore, that the diagnosis should be made at once within the war zone. It is better that a soldier whose mind has been deranged by the conditions of military service should not be sent to a lunatic asylum unless the case proves refractory to early treatment. The author points out the difficulties presented by more or less conscious simulation. It is in dealing with such cases that the experience of the psychiatrist is most useful as, without special knowledge, mistakes are easily made. Once the doctor has made up his mind that the soldier is shamming, the best plan is to send him back to the fighting line. The results of treatment in the psychiatric stations within the war zone are very satisfactory. In some forms of psychosis the proportion of cures within the first ten days is sixty per cent.—Ontario Hospitals for the Insane. Bulletins 9: 6–7, July 1916

Mott, Frederick, W., M.D. Effects of High Explosives upon the Central Nervous System. (Lettsomian lecture no. 1) Lancet, Lond., Feb. 12, 1916, p. 331–38. Illus.

FUNCTIONAL NEUROSES AND PSYCHOSES

The production of functional neuroses and psychoses in a soldier is greatly favored by a neurasthenic condition, whether from a tendency inherited or acquired from the stress of wartime experiences.

The effects of high explosives upon the central nervous system may be divided into three classes. 1. Immediately fatal, either from wounds caused by shell, rocks, etc.; or the person may be buried from the explosion of a mine. Sometimes instant death has occurred in groups of men from the effects of shell fire, yet no visible injury has been found to cause it. 2. Cases in which the detonation of high explosives has caused injuries to the body, including the central nervous system, that have not been immediately fatal. "The number of these cases which do not exhibit any of the functional disorders and disturbances characteristic of what is termed 'shell-shock' without visible injury, although such individuals have received most serious and fatal wounds from exploding shells, leads one to consider that in a large proportion of cases of shell-shock without visible injury there are other factors at work in the production of the nervous symptoms besides the actual aerial forces generated by the explosive." 3. The third group includes injuries to the central nervous system without visible injury. This may happen through direct aerial compression, or by the force of aerial compression throwing the soldier into the air or against the side of the trench, or by blowing a wall or roof down on to him, causing concussion; or by his being hit on the head or spine by a sandbag. Also, he might be buried and partly asphyxiated, or suffer from deoxygenation of the blood through CO poisoning, of which high explosives contain so great a quantity.

When enormous aerial compression is generated, the ordinarily incompressible and hence protective character of the cerebro-spinal fluid is altered, and it is probable that the compression is transmitted to the fluid about the base of the brain, causing shock to the vital centres of the floor of the fourth ventricle, resulting in instantaneous arrest of the functions of the cardiac and respiratory centres. Lord Sydenham concludes that the forces generated are sufficient to cause instantaneous death. It has been estimated that the sudden atmospheric depression in such cases corresponds to a dynamic pressure of about 10 tons to the square yard. "One effect of this is to liberate nitrogen suspended in the blood and transform it into bubbles of gas which are driven into the capillary vessels and cause instant death." A shock of sufficient intensity would also

make itself felt in all the neurons composing the central nervous system. Through anatomically and functionally correlated neurons, shock affecting one part of the nervous system may be transmitted to remote parts. "In haemorrhage into the internal capsule, we have a sudden irruption of blood cutting through the pyramidal efferent system of fibres, resulting in a flaccid paralysis of the opposite limbs." A case of hemianopsy, caused by a bullet wound of the skull, resulting in complete blindness, but not deafness, is described as another example of temporary dissociation by shock. This temporary dissociation by shock of anatomically and functionally correlated systems of neurons has been termed diaschisis.

The writer then describes in detail the physiological effects of shock upon the living neuron. The results of these effects may be not only dissociation of the cortical perceptor neurons, producing unconsciousness or a disturbance of consciousness, but for a varying period of time destruction of the power of recollection of perceptions prior to the shock, of the power of recognition, and even complete loss of consciousness of the external world.

An essential for consciousness is a continuous supply of oxygen through the capillary system to the intercalary neurons, otherwise they cease to function, causing dissociation. Any violent emotion affects the vasomotor centre and heart's action, causing a fall in blood pressure and so producing an immediate lowering of oxygen tension in the fluid. This causes suspension of function of the intercalary neurons of the cortex, followed by dissociation of the cortical perceptors and loss of consciousness.

"The symptoms of headache, weariness, loss of power of concentration, irresolution, and mental fatigue constituting a neurasthenic condition so frequently found as a result of shell-shock may be explained by the habit of drawing on the reserve of neuro-potential, and being unable through insomnia or sleep disturbed by terrifying dreams, worry and anxiety to restore the balance and return to the normal conditions of automatic renewal of nervous energy as fast as it is used. Physical shock accompanied by horrifying circumstances, causing profound emotional shock and terror, which is contemplative fear, or fear continually revived by the imagination, has a much more intense and lasting effect on the mind than simple shock has."

The article is concluded with a description of the nature of high explosives and forms of projectiles, and a discussion of theories regarding causation of instantaneous death of groups of men.

Mott, Frederick W., M.D. Effects of High Explosives upon the Central Nervous System. (Lettsomian lecture no. 2) Lancet, Lond., Feb. 26, 1916, p. 441-51. Illus.

Noxious Gases

"Many of the symptoms of CO poisoning are similar to those which I have observed in shell-shock with burial. It must not be supposed that in poisoning by illuminating gas or CO poisoning recovery is always complete, nor that the mental symptoms are always only of a transitory nature. It often takes months for the effects of the poisonous action of CO on the heart and nervous tissue to wear off, and in certain cases the damage is permanent."

The first decided symptoms occur when the blood is saturated with about 30 per cent of CO; with every degree of saturation up to 50 per cent, dangerous symptoms increase until loss of power and staggering prevent escape. Even after prolonged exposure to .1 per cent of CO recovery is possible; with .2 per cent loss of consciousness and power occur and in course of time death ensues; exposure to .3 per cent proves rapidly fatal. As the gas has no odor, soldiers would be unaware of its presence, and lying unconscious or buried in a trench which was being heavily shelled, they might easily be poisoned by the gas without knowing it.

The symptoms of CO poisoning are "headache, which may take the form of distension of the head without pain, ringing in the ears, interference with vision, which may become indistinct and blurred, hallucination of sight and even

blindness, giddiness, especially on exertion, powerlessness, yawning and weariness, often vomiting, shivering and feeling of cold, palpitation of the heart, and a feeling of oppression in the chest. . . . When men affected regain consciousness they appear dazed and stupid, and generally have no recollection of what happened. There is mental confusion, and they seem to have no power of concentration of thought, and they are unable to answer questions properly. Indeed, some of them look as if they were recovering from a drinking bout. The slightest anxiety or excitement will bring on a return of the symptoms complained of, such as tightness or oppression in the chest, palpitation and various pains and feelings of distress about the head while beads of perspiration may appear on the forehead. . . . Persons with a nervous predisposition . . . are more susceptible to the effect on the nervous system."

A very important derangement of the mind in CO poisoning is loss of memory. This may be characterized by intense retrograde amnesia together with loss of recognition. Sometimes a whole period of time is erased from the mind. Other symptoms are speech disturbances. The power of speech may be lost for some time or it may come back after many days. In some cases there is difficulty in uttering words, as though it required great effort to speak on the part of the patient. There is often repetition and reiteration of words and phrases. When this affection is of long duration, there are usually other mental symptoms. Tremors frequently occur. "These symptoms so accord with those functional disorders of the central nervous system which have so frequently been found to occur in shell-shock with burial that one naturally thinks it possible that while lying unconscious at the bottom of a trench or dug-out sufficient CO is inspired to cause these severe effects on the mind which some of these cases exhibit."

The writer next discusses histological changes in the brain in CO poisoning, shell-shock, and spinal concussion. Three cases are reported for illustration. Reproductions are given of photographs and photomicrographs, showing haemorrhages and cell disturbances of the brain from the above-mentioned causes.

There may be also poisoning by oxides of nitrogen. This, however, acts more as an irritant on the respiratory passages, causing pneumonia. Pneumonia may also supervene in CO poisoning.

The similarity of symptoms and histological changes in the brains of persons who have died from CO poisoning and those who have died from shell-shock with burial suggests the desirability of examining the blood during life for CO poisoning in severe cases of shell-shock without visible injury and where burial has occurred, especially if some time has elapsed before excavation.

The writer then gives a brief recapitulation of the possible effects of the detonation of high explosives on the nervous system in cases where there is no visible external injury. These are:

1. Commotion from the aerial compression.
2. Concussion with or without burial.
3. Decompression with embolism, by bubbles of N and CO^2.
4. Inspiration of CO during the aerial compression.
5. Prolonged inhalation of noxious gases while lying unconscious or partially buried.

"The mental and bodily conditions of the individual at the time of the shock may be classified as follows: 1. Inborn: (a) Timorous disposition and anxious temperament; (b) Neuropathic or psychopathic inheritance. 2. Acquired: (a) Locus minoris resistentiae in the central nervous system in consequence of alcoholism, syphilis, or previous head injury; (b) Lowered neuro-potential, the result of a post-febrile neurasthenia; (c) Nervous exhaustion, the result of mental stress, anxiety, insomnia, and terrifying dreams; (d) Bodily exhaustion from fatigue, cold, wet and hunger.

"A large majority of the cases of so-called shell-shock admitted with functional neurosis in some form or other occurred in individuals who either had a nervous temperament or were the subjects of an acquired or inherited neuropathy. In a certain number of cases the cumulative effect of active service, often combined with repeated and prolonged exposure to shell fire and projectiles

containing high explosives, had produced a neurasthenic or hysteric condition in a potentially sound individual. Some of the worst cases have occurred in soldiers and non-commissioned officers of years' standing—men of excellent physique who have led active lives without any evidence of a nervous breakdown; some, indeed, have fought in the South African War, and in this campaign had been in many battles and engagements without previously exhibiting any neurasthenic symptoms, but at last the nervous system gives way. Such men have not, as a rule, succumbed from a single 'shell-shock,' unless it was one of the big 'Jack Johnsons,' but only after a third or fourth, and when they have been run down with the stress and anxiety of continuous apprehension and dread of the enemy surprising them. On the other hand, there are the more or less rapid breakdowns who give usually a history of either previous head injury, or of a nervous breakdown in ordinary life, or after some special stress indicative of a nervous temperament or a neuropathic disposition. Among the large number of officers I have sent back on account of neurasthenia, a considerable number associated with shell-shock, I have not observed a single case of functional paralysis or mutism."

The remainder of the article is devoted to a discussion of epilepsy as influenced by shell-shock. Brief details are given of 25 cases returned from the front and treated by Dr. Mott. His opinion is that "cases which were said to have developed epilepsy as a result of shell-shock were, generally speaking, individuals whom it might fairly be assumed were either epileptics or potential epileptics prior to the shock."

Mott, Frederick W., M.D. Effects of High Explosives upon the Central Nervous System. (Lettsomian lecture no. 3) Lancet, Lond., March 11, 1916, p. 545–53

SYMPTOMATOLOGY OF SHELL-SHOCK

The symptoms of shell-shock as regards degrees of effects on consciousness may vary from a slight temporary disturbance to complete unconsciousness, with stertorous breathing continuing till death. Sometimes the men wander away from the trenches and are found in a dazed condition unable to account for their actions or to recollect how they came there. This condition is not unlike the fugue or automatic wandering of the epileptic.

The author next discusses amnesia as a condition resulting from shell-shock. Four cases are cited, in three of which music and songs familiar to the patient were used to arouse the power of recollection.

Psychic trauma and the effects produced by terrifying dreams are illustrated by reports of several cases.

Various forms of speech defects are common: mutism, aphonia, stammering, stuttering, and verbal repetition. The most frequent is mutism. Various cases are cited, in many of which cure was effected through a surprise or shock of some kind. The pathogenesis of mutism is described in detail and opinions of various authorities cited.*

Headache is one of the most common symptoms associated with shell-shock. With recovery of consciousness this tends to become acute. The commonest situation for the maximum pain is the occipital region and the back of the neck. The pain is variously described as burning, stabbing, or a heavy dull dizzy feeling, a feeling like a tight hat or a red-hot wire being run through the temples. It is worse at night, and seems to be correlated with thoughts of terrifying scenes and is increased when the mind tries to thrust these aside, or with any effort to concentrate.

Cardiac and vasomotor disturbances are palpitation, breathlessness on exertion, and praecordial pain. There may be physical signs of dilatation and tachycardia. The pulse is often small and increased in frequency; the blood pressure is never high. The hands are frequently blue or mottled and cold, with

* For a fuller discussion of the disturbances of vocalization see Mott, Psychic Mechanism of the Voice, etc. Brit. med. j., Dec. 4, 1915.

a clammy sweat of the palms. Surface temperature may be very low. The temperature of the hands varies according to the temperature of the room.

Cutaneous and deep sensibility of the body may be affected, or, in severe cases, sometimes loss of skin sensibility to all forms of stimulus, and also of deep sensibility are found. The extent and degree of this loss of sensibility is variable. Hyperaesthesia is more common than anaesthesia.

Hearing is often completely lost, frequently together with speech so that there is a condition of functional deaf-mutism. Sometimes a man is deaf on one side only, from a ruptured tympanum or from wax driven forcibly against the drum. Auditory hallucinations are common, and hyperacusis is frequent, exciting the patient's nervous condition and aggravating headache.

Sight may be seriously affected during the acute stage, but it is commoner for the patient to complain of "smoky vision." Failure of accommodation and sluggish reflex are not uncommon in acute stages. Occasionally there is diminution of the visual fields. Some cases of photophobia were met with, but this is usually due to gas or irritating substances in the eye. This was often associated with blepharospasm. A few cases of functional blindness have been treated. Loss of sight, hearing and speech is sometimes associated with acute hyperaesthesia.

Tremors are very common and constitute a serious disability. They may be coarse or fine, general or affecting only parts of the body, continuous during the waking state or absent during sleep. Most often they are rhythmical coarse tremors like those of paralysis agitans. A true functional tremor may be distinguished from a malingerer's tremor by making the patient count slowly and quickly. If the rhythm remains unaltered the tremor is truly functional. A case of functional tremor completely cured by suggestion is cited.

Various tics, which may, however, have existed prior to the war, have been observed. Choreiform movements, probably due to unconscious imitation of other patients, have been noted.

Functional paralyses are frequent, the most common being paraplegia, but hemiplegia and monoplegia are also found. Suggestion of injury often plays an important part in causing and maintaining a fixed idea of paralysis.

There are many different gaits. There are a refusal to walk, dancing tremor as if the legs were on springs, slow shuffling with feet wide apart, dragging the soles of the feet, and a gait assumed by patients who have been allowed to think they have to be supported by two sticks in order to walk, causing a persistent leaning forward, sometimes amounting to a complete bending double of the body. In such cases the supports should be taken away at once.

"Be cheerful and look cheerful is the note that should ever be sounded to these functional cases. Sympathy should not be misplaced although it should be shown to all these poor fellows who have a fixed idea of never recovering: it is not their fault, it is a real thing to them, and no one could be more grateful than these cases of functional nervous disability for cheery words. I use many of these cases that have recovered as object-lessons. I do not find hypnosis or psychoanalysis necessary or even desirable; only common-sense and interest in the comfort, welfare and amusement of these neurotic patients are necessary for their recovery. The conditions at Maudsley Hospital will be all that can be desired. There are light airy wards, and day rooms for meals and recreation, plenty of single rooms for the isolation of cases that are troubled with noises or require special attention; and especially valuable are the baths, so that every soldier can get a warm or cold spray every day. The warm baths, and especially the continuous warm baths, of which there are eight, are especially valuable for promoting the action of the skin, of relaxing the tired muscles, and by their soothing influence helping to induce sleep, so that less hypnotics are required to be employed.

"Diversion of the mind from the recollection of their terrifying experiences is essential for successful treatment. This can be best accomplished by the provision of every form of healthy indoor and outdoor amusements—*e. g.*, books, games and music. These are better in a recreation hall where convalescent patients can enjoy themselves. I have alluded to the hypersensibility of many of these patients to sounds, consequently neither gramophones nor billiards

should be within the hearing of these acute cases. The out-patients' waiting-room will be utilized at the Maudsley Hospital for recreation. . . ."

Mott, Frederick W., M.D. Psychic Mechanism of the Voice in Relation to the Emotions. Brit. med. j., Dec. 4, 1915, p. 845–47

ABSTRACTS OF PARAGRAPHS ON MILITARY PSYCHIATRY

"In my experience at the military hospitals a number of remarkable cases have come under my care illustrating several points in connection with the psychic mechanism of the voice in relation to the emotions. A large number of men suffering from shell-shock, and having no visible signs of injury, have lost their speech, and yet are quite able to write a lucid account of their experiences. This mutism is really an exaggerated form of hysterical aphonia. A woman, owing to an emotional shock may lose her voice; she can, however, as a rule whisper. These men cannot whisper or produce any audible sound. They occasionally show the bodily signs of extreme terror." Sometimes in their dreams these soldiers call out expressions they have used in battle or in the trenches. Occasionally this is followed by a return of speech. The frequency with which these cases of shell-shock suffer with terrifying dreams at night and sometimes in half-waking states during the day means that the emotional shock is exercising an effect upon the mind by thoughts reverting to terrifying experiences, and the same thing probably accounts for the terrified, vacant look of depression on their faces, the cold, blue hands, feeble pulse and respiration, and sweats and tremors.

"The sudden and varied manner in which these mute patients recover their speech is indicative of a refractory condition of respiration in its function of voluntary production of audible sounds in all forms." The author then mentions cases of recovery caused by unexpectedly feeling pain, by tickling, by shouting out in dreams, by involuntarily joining in a well-known chorus, and by various other kinds of surprises.

"As depressing emotional conditions . . . play an important part in aggravating the shock effects of shell fire and maintaining subsequently a more or less transitory functional neurosis in the form of deafness, blindness, paralysis, tremors, and mutism, we may suppose the sudden emotional excitement, especially if it be connected with the preservation of the individual, is followed by such a powerful stimulating reaction on those depressed nervous centres that the refractory phase established in them by the shock is suddenly overcome. I believe this mutism is due primarily to an inhibitory functional paralysis of the voluntary cerebral nervous centres which control the management of the breath and direct its mode of escape through the glottis, mouth and nostrils, for I have seen many cases where they have involuntarily and unconsciously in their dreams talked and uttered cries and swears, but in their conscious state were unable, not only to talk and sing, but to whisper, whistle, utter a cry, cough, or laugh aloud. The worst cases were unable even to blow a candle out. I examined one with the X-rays and found the diaphragm hardly moved in respiration; he could not expand the chest necessary to fill the bellows. Latterly he has acquired this power; he can now take a fairly deep inspiration, but yet he cannot talk or even whisper, cry or laugh aloud; he blows a candle out with the mouth open instead of moulding the lips. Therefore in his case there is an inhibition of the whole voluntary mechanism of audible sound production." The author then describes this mechanism and its double interdependent action of phonation and breath control.

He then discusses the difference between symbolic language, or that produced by civilization, and the universal language of primitive human beings, which expresses itself through mimicry and gesture, and is dependent upon an instinctive preorganized mechanism in the central nervous system. "The effect of emotional shock in the production of mutism is upon this preorganized mechanism which controls the force and mode of escape of the breath in the expression of the emotions and passions. . . ."

"The terror sometimes observed in soldiers suffering from shell-shock is contemplative fear; it is fear made more or less permanent by the imagination fixing in the memory past terrifying experiences, repressed in great measure by conscious activity of the mind during the waking state, but evident in the dreams which afflict nearly all these soldiers suffering from shell-shock and trench warfare."

Mott then cites the case of a soldier through whose brain a bullet had passed, damaging the half in which are located the centres controlling articulate speech, so that he was able to make no voluntary sounds except "oot" for no, and "ah" for yes; yet, if the first word or bar of music of any of several songs was given to him, he was able to sing it through without difficulty. "It must be concluded either that the song had been repeated so often as to have become organized in both halves of the brain or in subcortical lower centres." The soldier recovered a month later his ability to walk and speak.

The article is concluded with a discussion of the interdependence of the psychic and physiological mechanisms of vocalization.

N. Y. med. j. 100:830, Oct. 24, 1914. Mental Disease and Defect in U. S. Troops (Editorial)

The care of the health of armies has led to remarkable discoveries for the health of nations. Yellow fever received its quietus through the efforts of army physicians, and many other tropical diseases, besides malaria, might have lurked for eons in their jungles had not army physicians "got their range" with the microscope and put them to rout. Bulletin No. 5 (Captain Edgar King, *Mental Disease and Defects in United States Troops*) of a valuable series has just been issued by the Department of War of the United States as a result of observations upon patients with mental diseases admitted during one year, either from military prisons or directly from the army, to the Government Hospital for the Insane at Washington. Mental diseases formed twenty per cent of the total discharged for disability from disease or external cause, and dementia praecox was the most frequent, running as high as fifty-six per cent in that year and forty-seven per cent in other years.

The army offers an excellent place in which to observe men mentally afflicted while in the early stages of their disease, and as it lies in the power of the government promptly to remove them from society for treatment, and to keep them from passing on their hereditary taint, the rank and file of the army may be made the medium of an object lesson to show what can be done to improve a nation's mental health, exactly as the Canal Zone offered an opportunity to show how a tropical jungle could be turned into a health resort by efficient sanitation.

The early diagnosis of mental diseases, as well as the segregation of the seed bearers of the inheritable forms, has been considered almost impossible, because of difficulty in recognizing the need of medical care. It is true that the ability to make exact diagnosis of mental diseases has hitherto necessitated the work of a lifetime, for the reason that the present generation of physicians, who have specialized on this subject, is the first to have worked out careful methods of observation, and to interpret apparently unintelligible clues. The opinion of the different states is wavering between the extremes of tender and expensive care for its deficient population and the most drastic measures of reducing the number of unborn defectives. Educational and legislative measures are both under discussion. Here is a chance for the government to demonstrate some practical method of classifying and handling cases according to their menace to the future, as well as to the present generation.

Bulletin No. 5, however, confines itself to the question of early diagnosis. It is practically a detective handbook, written in clear, straightforward English, by which the doctor and officer of the army may learn to recognize mental defects in men who at first sight seem to be merely stupid or stubborn, flighty or conceited, or in some way not susceptible to discipline. There are very clear sketches of dementia praecox, manic depressive psychosis, paranoid mental states, general paresis, and syphilis of the nervous system. These are illustrated

by case histories, showing typical acts and conversation, pointing out the delusions and hallucinations that characterize the diseases, and showing how the patients react to discipline, so that it would not be difficult for the careful and progressive army doctor to differentiate between the man who is mentally sick and one who is frankly careless or insubordinate.

Such a clear, definite picture of the common mental ailments, that in their early stages appear so much like exaggerations of temperament or peculiarities of religion or upbringing, will be valuable, not only to the army doctor, for whom it is written, but to college professors, socialist leaders, and men who labor to understand and to control large bodies of laborers. There is an enormous waste to the community in this inability to recognize the mentally deficient worker before he becomes openly stranded in poverty or crime. There are many who could be treated and cured, many who could be saved in a change of environment, and many whom the government should take under its care, even in these early stages, for the sake of protecting future generations. Early diagnosis is the first step; and Bulletin No. 5 is the most practical help in this direction that has yet been offered.

N. Y. med. j. 104:414–15, Aug. 26, 1916. Pathological Accompaniments of Mental Strain in Warfare (Editorial)

Just as mental disease appears to be a growing menace coincident with the more complex requirements of civilization, so does any increase in the tensity of national affairs show a corresponding addition to the number of mental diseases. It was only to be expected that the present war would prove no exception to this rule. The reports which reach us from the firing lines describe conditions which prevail there by such terms as "inferno," "hell on earth," and "orgy of death." Surely it is small cause for wonder that some of the men forced to live through such scenes should succumb under the strain, and that those who are predisposed by reason of some psychopathic determinant in their heredity should manifest psychoses.

In the *British Medical Journal* for March 25, Dr. R. G. Rows called attention to some of the mental conditions found at the front, as observed at the Red Cross Military Hospital, at Maghull. It seems that most of the men who broke down under the stress and were found to have psychoses and psychoneuroses, could be definitely proved to be neurotic; some had had distinctly psychotic attacks in earlier life. Not infrequently the history was of a mild psychotic episode years before with inadequate recovery. By inadequate recovery is meant that the patient instead of adjusting his mental conflict, compromised by leaving the scene. Then he drifted into the army with his mental trouble still dormant. One of these men accidentally shot a comrade; another had a friend shot dead at his side. Shocks of this kind brought back the psychotic symptoms.

Doctor Rows takes an enlightened view of the problem. He thinks that the mechanism of simple mental process should be described to the patient in plain language, and the emotional affect accompanying psychic events and its persistence in the unconscious be explained in understandable terms. In short, a psychic catharsis should be attempted. He believes also that a special hospital with an efficient staff should be devoted to work of this sort.

N. Y. med. j. 104:857, Oct. 28, 1916. The Previously Insane Recruit (Editorial)

One of the most puzzling problems with which the recruiting surgeon has to deal is the determination of the mental status of the candidate for enlistment. Many who are high grade imbeciles, who have previously had a psychosis, or who are potential psychopaths, show very little to the observer, even to the medical man if he is unskilled in psychiatry. Consequently in the ordinary enlistment of men in the United States service which goes on in times of peace, many men are accepted who later manifest psychoses and cause the government much trouble and expense before final disposal is made of them. Should war occur we must expect the occurrence of conditions such as have been observed in

all the countries now at war, that is, a rush of volunteers, anxiety on the part of the recruiting officers to swell the ranks at the front as quickly as possible, overwork of the military surgeon, and the natural result, the passing of men who are unfit for duty, physically or mentally.

It is the latter class who are most apt to be accepted to the subsequent detriment of the service. Many cases, for example, have come to the attention of the military authorities in Great Britain. Sir George Savage read a paper dealing with these cases before the annual meeting in July of the Medico-psychological Association of Great Britain and Ireland. He had found that many military surgeons, in their natural desire to help their country and holding the enlightened view that one attack of mental disorder should not be held against a man who had made an apparently complete recovery, had accepted men with such a history, only to have them break down, in training or immediately after arriving at the front. A more careful investigation of the family history then usually revealed that there was bad heredity in addition to previous mental disorder.

The attitude of the friends and relatives of the candidate often seemed to be responsible for the enlistment of such men; they were urged to enlist by employers and others who thought they were cowardly because they hesitated, the real reason being fear of their own condition. Finally, unable to bear the stigma of cowardice, they enlist, tell the surgeon they had a mental breakdown years ago, but are all right now, are accepted, and soon collapse under the emotional stress of warfare.

The consensus of the British experts now seems to be that no such recruit should be enlisted; and this is wise. We should not think of advising a man who had had one attack of tuberculosis to accept a job in a dusty workshop; we should not encourage a man who has had a mental breakdown to put himself in a position where he will be subjected to mental strain. The environment of such persons should be as little exacting and as free from emotional tension as possible, yet the exact opposite prevails in an army engaged in sanguinary conflict. These soldiers will cost any government more trouble attending to the many who break down than the few who escape unscathed are worth to it; and our own country should formulate some method of weeding out these men before the exigencies of war make the problem doubly dangerous. It is impossible to foresee how many of our recruits would break down under the strain of modern warfare, but judging from the increase of insane and nervous invalids in this country the number would be large. This is a phase of preparedness that should be heeded.

N. Y. med. j. 104: 1250–51, Dec. 23, 1916. War and Psychanalysis (Editorial)

Many interesting revelations in the domain of functional nervous disorders have been disclosed by the present European war. In the first place, the old dictum that nervous conditions do not manifest themselves externally has been verified by the large number of neurotic candidates that passed the physical examination only to break down under the first severe strain in the training camps or trenches. It is quite evident that only men with strong constitutions are fit for the mental and moral shocks of war. Another important observation derived from a survey of the nervous victims is the realization that modern warfare imposes tremendous nervous tension and mental strain, so that adequate provision should be made to take care of all the neuropaths. This is a phase of preparedness that we should do well to keep in mind, and in which we may profit by the experience of others. Finally some interesting light has been gained from the war concerning Freud's theories of the psychoneuroses, and the value of psychanalysis as a form of mental training. The severe demands of war and the rigid discipline of military training have quickened the instinctive emotions and transformed the repressed energies into great and heroic bravery. Suppressed desires and buried complexes may be factors in the blight of overcivilization, but in time of war these primal instincts find an outlet for themselves in the call of duty and patriotism. However helpful psychanalysis may be in time of peace, in time of war such methods appear unnecessary and undesirable. In fact, the

conviction is forced on us that well directed discipline is superior to psychanalysis at all times, and that personal development and happiness cannot be divorced from self sacrifice. It is fair to assume that some of the concepts regarding the fixation of the libido, and the correct psychanalytical treatment will be greatly influenced by the experiences of the war.

Osler, William. Functional Nervous Disorders. J. of Amer. med. assoc. 64: 2001–02, June 12, 1915

"Types rarely seen in males in this country or in the United States are very common, and an explanation is to be found in the extraordinary stress and strain of trench fighting."

Shell-Shock Paraplegia.—Causes lack of consciousness or a dazed condition lasting for several hours, with a paraplegia lasting often for weeks and gradually disappearing. Reflexes are increased, sometimes there are hypertonus of the muscles, hyperesthesia, and difficulty with bladder and bowels.

Psychic "Knock-Out."—Due to shell shock. The victim remains in a state of stupor, with loss of memory and speechlessness or stammering, recovery following in a few days. A condition of irritability often persists for weeks.

Involvement of the Special Senses.—Very common. Accompanying conditions are headache, tic, constant blepharospasm, photophobia, monocular amblyopia.

Functional Dysbasia.—All sorts of anomalous gaits are encountered. Case described.

Functional Spasm of Leg Muscles.—Cases given. Treatment by massage and electricity. The use of tobacco has a deleterious effect upon recovery.

The rest of the article is devoted to a discussion of the effects of gas poisoning.

Régis, E. Précis de psychiatrie. 5th ed.

The latest edition of this well-known textbook states that it would be impossible to eliminate from the army and navy psychical degenerates as well as physical degenerates. The mental state should be studied by the examining board at the time of enlistment and also during active service. A very common mental disease among officers is general paralysis. One may also observe traumatic and alcoholic psychoses, maniacal and melancholic states, and systematized delirium. Thus among soldiers we find all the psychopathic disorders, such as alcoholism, systematized delirium, maniacal and melancholic states, epilepsy, nostalgia, epidemic suicide, etc., but degeneracy prevails, with or without delirium. Such degeneracy is either simple (unstable, old and eccentric people, feebleminded, imbecile, and idiot) or congenital (neuropathological or psychopathical manifestations). Amongst abnormal soldiers, pathological fugue is most frequent (illegal absence or desertion). Consequently, when a soldier runs away it is necessary carefully to study his mental condition. In all cases the medical expert must observe, ponder, and wait before deciding upon responsibility or simulation.—R. F. Sheehan, U. S. naval med. bull. 8: 485, July 1914.

Régis, E. Psychic and Neuropsychic Affections in War. . . . tr. in Bost. med. and surg. j. 175: 784–92, Nov. 30, 1916

In regard to the psychoses and neuropsychoses of war, "among the principal points emphasized by the Russian psychiatrists, such as Jacoby, Chaikewitch, Serge, Soukhanoff, Oreretzkowsky, Vladitchke, Ermakoff, Awtokratow, and Cygielotrejch, or by the English, such as Stewart and Kay, may be cited: First, the great frequency in modern wars of cases of psychoses and psychoneuroses—a frequency such that the Russians had to establish at Kharbine and at Moukden in Manchuria, psychiatric hospitals. Second, the predominance of acute, often transitory, psychoses and neuropsychoses clinically analogous to those resulting from severe accidents. Third, the particular multiplicity of cases of this sort following maritime battles. Fourth, the necessity of psychiatric care for armies on campaign, consisting of improvised hospitals in regions sufficiently remote from the base of operations and from the passage of troops."

The author agrees with Jacoby from the nosologic point of view on the fundamental characteristic that the suddenness, extent and horror of the modern battle act as "cosmic catastrophes" causing epidemics of psychic disturbance. Two of Régis's pupils, Laures and Hesnard, have published observations concerning this theory. The author upholds Jacoby also as to the value of organizing a special psychiatric service in case of war.

"The solution adopted by Russia, of special hospitals for the insane improvised at sufficient distances from the field of operations, is certainly the best. In case of need, even special pavilions annexed to ordinary field hospitals would suffice, on condition that their medical direction was entrusted to specialists. The psychoneuroses or psychoses from moral shock, which predominate in great cataclysms and great battles are, in fact, in the large majority of cases, essentially acute, transitory, and curable in a few days. On the other hand, no treatment is better suited to the acute psychoses of all forms than rest in bed. . . . These pavilions would serve at the same time for the traumatic insane and for the post-operative, who would evidently be more numerous in the circumstances of which we speak.

"It is an organization of this sort which Professor Simonin of Val de Grace also recently urged in his conference of December 13, 1912, with the federal union of reserve and territorial physicians, on psychoses of wartime and psychiatric aid in the field." Among authorities who have written works on this subject the author mentions his colleague, Tactet, Stier of Berlin, Drastich of Vienna, and Kay of Bristol.

From August 1914, Dr. Pouchet, director of the health service of the eighteenth district, established a central psychiatric service for the care of mentally and nervously disturbed soldiers at the military hospital at Bordeaux under the direction of Dr. Salesses.

Cases observed up to December 31, 1914, to the number of 150, may be divided into two classes: First, psychoses in soldiers who have not been under fire, of which there were sixty-two. Second, psychoses and neuropsychoses of soldiers returning from the front and induced by battle. Of these there were eighty-eight.

Psychic Disturbances

Hallucinatory oneirism, or morbid dreaming, caused by emotional shock and only temporary in action, never lasting more than two weeks, accompanies all cases affected with psychic or neuropsychic disturbances following battle. Since the declaration of war, hallucinatory oneirisms of battle have appeared also among alcoholics who have remained at home or at garrisons.

The other predominant syndrome in the psychic disturbances in question is that of mental confusion. It is of sudden onset, not usually of long duration, and its essential characteristic is amnesia, usually total. This condition may be accompanied by the most vivid and agonizing recollection of the event that produced the shock, a fixed idea by day and a terrifying hallucination by night reproducing itself always during sleep.

Etiology

The predisposition in patients affected with mental confusion and hallucinatory oneirism is not an hereditary one. The hereditarily disposed are usually weeded out by their predisposition before the firing line is reached. A true emotional constitution is the particular predisposition for the psychoses of battle. Neither is the physical traumatism the occasioning cause. Of fifty patients, twenty-two had been wounded and twenty-eight had not. Other causes, besides this principal one of violent emotional shock in impressionable individuals of a nervous temperament, are physical and moral fatigue, long marches, perpetual alertness, insomnia, and prolonged inactivity in the trenches. It is an interesting fact that these psychoses affect preferably men of the reserve, and are most intense, especially in the amnesic form, in officers.

Diagnosis, Prognosis and Treatment

The important point in diagnosis consists in differentiating these psychoses of battle from the ordinary psychoses, or manias. Cases of psychoses of battle

are usually of a transitory nature, and should not be considered as cause for commitment to an institution, but should be treated by a military psychiatric service established at the seat of each division of the health service. These, like the delirious wards existing at Bordeaux and Paris, and those established in 1900 in the marine hospitals, should be composed primarily of several cubicles or isolation chambers for the violent, and an open ward for the calm and inoffensive. These, especially the cubicles, should be on the ground floor and near together. This central service should receive not only subjects from the military hospitals, but also those from the temporary and auxiliary hospitals of the city and of the neighboring regions. The wounded in need of psychiatric treatment may, according to the nature and degree of their psychic disturbance, remain in the surgical wards, or go to the psychiatric centre and have their wounds dressed there by the hospital surgeons. "It is indispensable to entrust the psychiatric service to a specialist, supported by at least one assistant and by a competent personnel of attendants whom he shall train. . . . The function of the physician in these regional centres of psychiatry is at once delicate and manifold. It consists essentially first in receiving all soldiers afflicted with disturbances predominantly psychic, observing them, and establishing a diagnosis at once rapid and exact; second, in referring without delay to the neighboring insane asylum those affected by mania, . . . third, in treating and curing as quickly as possible those capable of rejoining their commands in a few weeks, and in forming on the other hand a suitable decision in the cases of those more severely affected, particularly those presenting confusional associations." Delirium caused by acute infectious disease must be carefully differentiated from insanity by employing every measure of diagnosis, physical as well as mental. "It is obvious that the specialist in charge of the central psychiatric service should, at the same time, fulfill the functions of expert in the war council of the region, these functions being in time of war more important and active than ever. It is thus that affairs have been organized at Bordeaux since the beginning of hostilities."

Neuropsychic Disturbances

These are closely related to the psychic disturbances. Epilepsy is rare. Neurasthenia is more frequent, especially among officers. Hysteria presents the most varied, unusual and peculiar cases: syndromes of terror, trepidation, spasm, tic, convulsions, impotence, anesthesia, paralysis, urinary incontinence, blindness, deafness, mutism, somnolence, delirium, sometimes transitory and disappearing at the least suggestion, sometimes tenacious and resistant to the highest degree. One of the most frequent of these is the syndrome of functional paraplegia or pseudoparaplegia. Observations were made at the suggestion of Inspector-General Delorme in temporary hospitals numbers 4 and 78, directed by Drs. Bergonie and La Grange. Patients first have more or less disability of the legs, cutaneous sensibility is more or less diminished, especially in the lower extremities, reflexes are variable, and there are usually headache and variable pains. The cause is undoubtedly violent emotional shock. No sign of organic lesion was observed in the cases studied, hence we may draw the conclusion that the malady is purely functional and develops only in predisposed subjects. Others who have studied and reported cases of functional paraplegia are Dejerine, Babinski, Sollier, Moulinier, Drivet and Bernadou.

Richards, Robert L. Mental and Nervous Diseases in the Russo-Japanese War. Mil. surg. 26: 177–93, Feb. 1910

In the Russo-Japanese war, for the first time in the history of the world, mental diseases were separately cared for by specialists from the firing line back to the home country.

After a brief sketch of the care and treatment of the insane in Japan, Captain Richards takes up mental disease in the Russian Army during the Russo-Japanese war. The number of cases was unusually large, reaching possibly 1,500 up to 1904, and 2,000 in 1905–1906. Harbin was early selected as a central point for collecting these cases. "The number of admissions increased rapidly from month

to month, being six times as many the last month as the first month." Because of this increase, the army medical department could not provide for the cases, so the work was taken over by Professor Awtokratow, of the Red Cross Society of Russia. A hospital and dispensaries were established, an ambulance followed the troops for cases occurring during action, and whenever possible, cases were sent to Russia. Captain Richards describes in detail the wonderful work done by Professor Awtokratow and his staff of doctors and nurses, not only in the hospital and dispensaries, but also on the field and on the way back to Russia, both on land and sea. Two tables showing the character of the work at the central psychiatric hospital at Harbin are given.

The psychoses of war are chiefly depressive in character. Fear of the comparatively harmless gas-bombs of the Japanese was one form of psychosis.

Richards, Robert L. Study of Cases of Mental Disease from the Standpoint of the Military Surgeon. Mil. surg. 26: 527–38, May 1910

"For a long time mental diseases have been regarded the least understood of all the diseases with which the military surgeon has had to do," and there is very little information about case histories available. The reasons for this are threefold: first, military life exposes soldiers to unusual stresses, resulting often in acute mental diseases of comparatively short duration, with very large recovery rate; second, in all mental disease the hope for recovery is almost exclusively in the early stages before permanent damage is done to brain structures; and, third, unless there is a record of the facts observed in the case before its transfer, the authorities at the government hospital have very little from which to judge of the early stage of the disease, and are often hampered in this respect in judging the character of the mental disease and its probable termination.

In order that these difficulties may be met and disposed of in the environment in which they arise, a "Scheme for History and Examination of Mental Cases" has been issued by the Office of the Surgeon-General (March 24, 1910). This scheme is more simple and concise than most of those used in foreign clinics and so meets better the requirements of the army. The author quotes the scheme in full. It comprises data as to family history, history of patient, present illness, general physical examination, neurological examination, and mental examination. Captain Richards follows the scheme with comments upon the different sections, treating especially in detail the section for mental examination.

Richards, T. W., translator. Nervous System and Naval Welfare.* U. S. naval med. bull. 8: 576–86, Oct. 1914

We have noticed that from year to year, among the affections observed in the navy, mental and nervous diseases together, exactly those which concern us here, are becoming more and more prominent. Thanks to the more extensive experience acquired, attention is being given to the mild cases which appear insignificant and which were formerly treated with neglect until the day when it was perceived that they became aggravated, to result in general and prolonged disorders and to the great detriment of the individual and of the navy. . . .

"The medical officer who has occasion to observe these cases will quickly discover that two great groups of affections appear with particular frequency, while many others show themselves with surprising rarity, considering so large a field. These two groups are on the one hand, the mental disorders of young men, and on the other the nervous exhaustion (neurasthenia) of those who have served one or more enlistments.

"Reports based on figures from the last great wars show that the number of mental diseases is greater for all combatants, but in particular for the officers. The number of cases increases a little after the outbreak of the war, reaches a maximum when the war attains its full development, and does not fall again until long after it has ended. For the Russian Army during the last war the

*The original article, entitled "Gesunde Nerven und Seekrieg," appeared anonymously in the *Marine-Rundschau*, v. 21, no. 9.

figures rise to two cases per 1,000 (total of all forces). For the army in the field one notes especially cases of excitement and mental confusion. Individuals placed in a state of lowered resistance by alcoholism, former illness, or hereditary taints were the first to be attacked. If, as we have said, an increase in the number of these cases is a fact signalizing every war, this proves that among all the men assembled many carry the seeds of an affection perhaps already recognizable by the alienist; others have had nervous trouble during their youth which will become aggravated under the influence of fatigue until manifested by symptoms which can be no longer overlooked. Mental maladies are becoming known better and better; and if the number of cases cited in reports is increasing, this increase may be accepted with satisfaction as a sign that we understand more clearly how to search for and recognize these affections."

The author then discusses neurasthenia, particularly in its relation to naval warfare. He states that it attacks especially continuous service men, and in most cases makes them unfit for further service. Nearly always the origin of the disability is attributed to unfavorable circumstances in navy life, a fact well recognized by the board charged to decide the question. There is not a single branch of the service which has not been cited as a cause—temperature, lack of ventilation, poor or insufficient food, laborious service in the engineering department, at the guns, on the bridge, or fatiguing mental work. "While we cannot scientifically admit that these factors act as unique and exclusive causes, . . . one understands, nevertheless, that when they exert their action on a nervous system already enfeebled, they aggravate a pre-existing morbid state to the point of rendering the individual unfit for further service." Heredity, family conditions, defective economic conditions, the inability to adapt readily to new conditions, over-zealous ambitions, and finally alcoholism, all play an undeniable role in the development of neurasthenia.

Are there remedies for any of these conditions? Men incapacitated by heredity and psychopathic make-up can be eliminated to a great extent by more exacting examination of recruits. Those who find themselves unable to adapt themselves to the demands of the service should be advised to leave it, for their own good and for the good of the navy. The unfavorable circumstances in navy life, however, can be remedied to a great extent, and these reforms are being carried out, particularly as concerns the men of lower ratings. The officers are still overburdened with responsibilities, anxieties, and long and monotonous duties that require unbroken exhausting activity. It is very desirable that some of the ameliorations affected by hygiene be applied to this situation.

The author summarizes his conclusions as follows:

"The primary requisite for the success of a fleet in a naval war is a healthy personnel so far as concerns the nervous system.

"All possible measures should be taken in the fleet to overcome the damage caused by individuals defective in this respect in view of grave developments, and to assure selection of men in the best of conditions.

"If it appears that, in recent years, there has been a slight increase in diseases of the nervous system this fact need not cause anxiety regarding sanitary conditions. On an average, the crews are in condition to meet any exigency.

"Medical officers must eliminate weaklings from the navy and see that they are replaced as far as possible, by an equal number of sound men.

"There is no peril in the present situation. Diseases of the nervous system are only a menace to an exhausted people who cannot make good their deficits."

Riker, G. A. Treatment of Insane in the Navy; being a Discussion of the Temporary Treatment of Mental Aliens Prior to their Commitment to the Government Hospital for the Insane. U. S. naval med. bull. 7: 77–86, Jan. 1913

This article is confined to conditions arising early in psychoses, with suggestions for treatment.

"The mental diseases most commonly observed in the navy are dementia praecox and manic-depressive insanity, with an occasional case of paresis,

alcoholic delusional insanity, Korsakoff's disease, the psychoses sometimes associated with epilepsy and rarely paranoia."

As ordinary methods of treating cases of mental disease are almost impossible on board ship or in naval hospitals, members of the hospital corps must closely watch all patients, first, to study the case for treatment; and, second, to prevent self-destruction, or injury to others or property.

Some points to be investigated follow:

1. Endeavor to procure as detailed as possible an account of patient's former life and of his family.

2. History of oncoming attack, attitude toward and character of his work, manners, recreations, personal habits, domestic relationships.

3. Careful physical and mental examinations, noting all symptoms of mental abnormality.

4. An accurate account of the patient's present actions and habits must be recorded.

"While the patient with suicidal tendencies is a constant source of anxiety to a medical officer of a hospital for the insane, that anxiety is increased tenfold with the medical officer of the navy, as he must leave his patient in the care of men untrained in handling the insane, and often in quarters that are not desirable for such cases: the latter is particularly true on board ships, where it is frequently necessary to place such patients in the brig for safe keeping."

The writer then takes up the question of establishing special pavilions for the reception of such cases.

"Primarily we must have constructed at several of our hospitals a special pavilion for the reception of these cases. It would be advisable to have these additions at Boston, Washington, Mare Island, and Canacao, in order that all persons of the naval service becoming insane at Newport, Portsmouth (N. H.), and Chicago can be immediately transferred to Boston; those from New York, Philadelphia, Annapolis, Norfolk, Charleston, and Port Royal could be gathered at Washington; Mare Island acting as the receiving ward for Puget Sound, Samoa, and Las Animas, and Canacao receiving insane patients from Guam and the remainder of the Asiatic station."

The type of construction suitable for a hospital for mental patients is described in detail. Instructions for members of the hospital corps are given in full for care and treatment of mental patients.

Roncoroni, L. War Mutism. Il Morgagni 58: 424–26, May 10, 1916. Presented at a meeting of the Medical Society of Parma

At a meeting of the Medical Society of Parma in November, 1915, L. Roncoroni reported four cases of war mutism (*Il Morgagni*, May 10, 1916). Two of the patients had an evident predisposition to mental disease, one of them having attempted suicide some years before, while the other at the age of sixteen, after seeing an apparition of a woman clothed in white in his room at night, remained three days without being able to utter a word. The affection also occurs in non-combatants; one of the patients was an orderly, and another a chauffeur employed in collecting wounded. Although the condition is known as war mutism, in the author's cases there were other phenomena—sensory and motor, organic and psychic—besides the loss of speech. One man was the subject of automatic motor symptoms with rhythmical movements of the head—flexion, extension, and from side to side—and twisting of the trunk, which lasted four days consecutively. Two had some muscular hypertonia, especially in the lower limbs; in three there was definite diminution in sensitiveness to pain. In one there was exaggeration of reflexes superficial and deep, and immobility of the eyeballs, so that the man seemed to be always staring at one point. There was an arrest of all the higher psychomotor functions. In the first days the patients were motionless, and incapable of reacting to external stimuli, or manifesting a spontaneous activity except in regard to taking food and emptying the rectum and bladder. In most cases sleep was not disturbed. The power

of writing was always recovered before that of speech. In three cases the more important symptoms disappeared after three to ten days, and in a fortnight or three weeks cure was complete, except in the case of the man who had previously attempted suicide. In all the cases there was loss of memory, which lasted some days. Roncoroni holds strongly that war mutism is not hysterical in nature.—Ontario Hospitals for the Insane. Bulletin 9: 9, July 1916.

Rows, R. G. Mental Conditions Following Strain and Nerve Shock. Brit. med. j. 1: 441–43, March 25, 1916

A brief sketch of the work which is being done in the Red Cross Military Hospital, Maghull, in connection with mental and nervous disturbances.

"Judging from reports recently published in France—and these are fully corroborated by our own experience—it seems improbable that examination of the cases invalided from the war will add very much to our knowledge of the symptomatology of these conditions. On the other hand, such an opportunity to investigate a large number of those suffering from psychic disturbances during the early stages of the illness has never been provided before."

Description follows of cases suffering from intense fear or horror caused by some terrifying event, and from hallucinations relating to some experience at the front, complicated often by terrifying dreams or memories of experiences in earlier life with which a strong emotional tone was connected.

"It is the strong emotional factor which so compels the attention of the patient." Treatment can be successful only through the physician's gaining the confidence of his patient as early as possible and so making him co-operate in his own cure by an understanding of his condition and a consequent removal of the mystery of his illness and the attendant fear.

Schier, A. R. Detection of the Feebleminded Applicant for Enlistment—Value of the Binet-Simon Scale as a Diagnostic Aid. U. S. naval med. bull. 7: 345–60, July 1913. Illus. References

On account of the startling increase of mental defectives, it becomes the serious duty of the medical officer to examine carefully into the mental status of all applicants for enlistment, using every diagnostic measure to exclude mental misfits. Idiots and low grade imbeciles are so easily recognized that their exclusion is a simple matter, but the detection of the high grade moron, often physically perfect, attractive and bright looking, presents difficulties to be solved only by the use of some kind of mental test. The Binet-Simon system was tested on a series of applicants for enlistment at St. Paul.

From testing 100 applicants by these scales, the following results were tabulated:

Number passing 15-year tests	89
Number passing only 11-year tests	6
Number passing only 10-year tests	1
Number passing only 9-year tests	4
	100

Of the eighty-nine classed as normal, fifty-two were rejected on account of physical defects, leaving thirty-seven desirable for enlistment.

Physical defects were more frequently found among applicants failing on the fifteen-year tests, occurring in seventy-two per cent of those failing, and in only fifty-eight per cent of those passing. Three of the eleven given a mental age of from nine to eleven years were perfect physically, and no mental defect was made evident by their appearance, behavior, or manner of talking. The ordinary reading and writing test would have been passed by them and they would have been accepted for enlistment.

Conclusion—"The Binet scale in the examination of applicants for enlistment is practical and is a quick method of estimating their mental status, and therefore is an aid in the detection of mental feebleness which would otherwise pass unrecognized."

Schier, A. R. The Feebleminded from a Military Standpoint; Suggested Examination for Their Early Detection. U. S. naval med. bull. 8: 247–58, April 1914

The author introduces his subject by a discussion of the asocial character of mental defectives and of their consequent inability to adapt themselves to any kind of employment requiring application, judgment or a sense of responsibility. "From a military-naval standpoint this problem is no less important and presents an interesting and fertile field of study for the medical officer. . . . That such individuals can not adapt themselves to military life is certain. Such ideas as duty, obedience, truthfulness, and patriotism are entirely foreign to them. They tire early of instruction and can not adjust themselves to the changed conditions of the service. If left to carry out instructions or called on to think for themselves, their lack of dependability becomes manifest. When brought in contact with normal associates they soon feel their incompetence and become discontented and discouraged, which, added to their lack of stability, leads to desertion from the service. Others may resort to the misuse of alcohol, and while under its influence commit various offenses for which they are punished. Again, others become very irritable and at times develop periods of excitement, and finally definite psychoses.

"From an experience among the military offenders confined at the Naval Disciplinary Barracks at Port Royal, S. C., Passed Assistant Surgeon Mann, U. S. Navy, concludes that from three to ten per cent of the culprits there should be treated solely by alienists. Some one versed in psychiatric diagnosis, he believes, would perhaps materially enlarge this number. Further, that in from ten to thirty per cent the assistance of either the physician or alienist would greatly aid the penologist in his efforts to reform these culprits.

"The diagnosis of this degree of mental defect at the time of enlistment is, needless to say, extremely difficult. Certain it is, that it can not be detected by a casual inspection and a reading and writing test. To meet with any degree of success the examining officer needs a system of examination which will test the various mental functions, especially the power of attention, good sense, judgment, capacity to initiate, and adaptability. On the recognition of such points the diagnosis of a normal mind must rest. Such a scheme of examination should be standardized so that it can be given by different men and yet obtain fairly constant results by eliminating any serious personal equation. With a view of devising such a scheme the writer has been trying many mental tests. . . . As a result of this work a group of tests, believed to be suited for recruiting examinations, was selected and is submitted for further trial. This scheme of examination is not intended to bring out every form of mental defect, but an experience with it so far has shown that it will be a valuable aid in diagnosing the high grade feebleminded, whose deficiency would otherwise be recognized only after weeks of observation at the training stations. . . . The tests are very simple and easily given. It is their simplicity which may cause some to doubt their value, yet each one determines some phase of mental capacity. All applicants to whom they have been applied have been eager to pass them successfully. This is of decided advantage and adds to their value, inasmuch as they test to the fullest extent an applicant's mental capacity. It is also in favorable contrast to the use of such tests on criminals, who, being wary and suspicious, are inclined to show indifference as to their results. The examination should be conducted in a quiet room to avoid any distraction. The applicant should be urged to do his best and never should any replies be criticized. The family and personal history should be inquired into before beginning with the tests proper. The applicant should be questioned in reference to the number of years and the kind of schools he has attended; whether he has ever been an inmate of a state institution, and what his present and previous occupations have been, so as to learn how frequently he has changed from one kind of work to another. The results of each test are scored."

The author then states the tests, ten in number, in the order in which they are to be given, following the statement with a brief explanation of each test.

It was decided that for the purpose of differentiating the applicant of normal mentality from those unfit for service, seven tests should be successfully passed, and that thus ninety per cent of the feebleminded would be eliminated.

Schier, A. R. Review and Possibilities of Mental Tests in the Examination of Applicants for Enlistment. Reprint from U. S. naval med. bull. 9: 222–26, April 1915

A brief review of some of the results with mental tests at the Marine Corps recruiting station, St. Paul, Minn., and suggestions of possibilities indicated by their use.

The writer states that a year's application of the tests described by him in his previous article, "The Feebleminded from a Military Standpoint," has demonstrated no need of change in the tests themselves. "The range of mentality measured by them is sufficient for the purpose for which they are intended, namely, the detection of the so-called moron. . . . By far the large majority of morons fail to score a passing mark with these tests, yet some will pass all of them. It is unreasonable to expect any series of tests to reveal every form of mental defect, or to detect every type of offender or criminal."

A modification in the method of scoring in these tests was found necessary; that is, each test was given a relative value according to its difficulty, instead of the equal rating, that was originally used, thus relating the method to the Yerkes-Bridges point scale.

"One hundred consecutive physically qualified applicants were examined with these tests and marked in accordance with the point scale. . . . Reports on the intelligence, aptitude for the service and behavior of many were received from the recruit depot, subsequent to enlistment." Here tables showing a classification into four groups according to degree of mental ability, and of mental ratings and other data of interest gathered both before and after enlistment are introduced. "It will be seen from a comparative study of these tables, that the mental ratings given after a period of observation at the recruit depot in the main correspond with the degree of mental ability found at the recruiting station, as indicated by the number of points scored. This may be regarded as evidence of the accuracy of the tests to determine the grade of intelligence."

The four groups into which the writer divides his 100 applicants, as a result of the tests and further observations are as follows:

A	Well above to average	Safe and dependable
B	Above to average	
C	Average to doubtful	
D	Mentally deficient—subnormal or feebleminded	

"This classification . . . based as it is on only 100 applicants, would undoubtedly be materially changed if larger numbers were examined. However, it points out a line of research which it might be well to undertake."

The author draws the following conclusions:

"The continued examination of applicants for enlistment with the series of mental tests . . . has demonstrated the usefulness of these tests in detecting feeblemindedness.

"Only in so far as habitual offense, unmorality, and criminality are the result of feeblemindedness, are such tests of diagnostic value.

"The method of scoring first used has been modified by working out a point scale, based on the relative difficulty of each test.

"On the basis of points scored, and conduct and efficiency after enlistment, men may be classified into safe and dependable, doubtful, and mentally deficient groups.

"A classification according to mentality could be established only after large numbers of men had been listed and their conduct subsequent to enlistment noted.

"Investigation looking toward the establishment of such a classification, it is believed, would be of value, inasmuch as it would eliminate many hitherto unrecognized mental defectives from the service."

Sheehan, R. Exclusion of the Mentally Unfit from the Military Services. U. S. naval med. bull. 10:213–49, April 1916. Illus. by photos of mentally unfit types. References

The writer demonstrates, by quotations from statistical tables presented in the annual reports of the Surgeon Generals of the Army and Navy, that mental and so-called nervous diseases among enlisted men and officers are responsible for much nonefficiency and disability in the services, and large expense to the government. Of cases admitted to the Government Hospital for the Insane from the Navy, "it is estimated that about fifty-four per cent show predisposition to mental disease prior to enlistment. As to the form of insanity which service men are most likely to develop the records show that over fifty-six per cent were diagnosed as dementia praecox. That of general paresis was made in about twenty per cent, cerebral syphilis three per cent, manic-depressive psychosis about two per cent, miscellaneous about twenty per cent." The large proportion of dementia praecox cases is not remarkable when it is considered that this disease is essentially of the adolescent period. Because of the preponderance of this type of insanity, the writer describes in detail the type of individual prone to develop dementia praecox, its symptoms, etiology and pathology, and gives cases.

The feebleminded include those individuals who are deficient in the sphere of intelligence. "Of course only the milder grades should cause any diagnostic difficulties. . . . Great assistance was expected from the use of the Binet-Simon scale. However it has not been found that this, in its present form, is adaptable to service use. . . . Of more value is the knowledge of the reactions of the subject to his environment. A cross section of his career will give us the most valuable data on which to base his exclusion." Case histories follow.

Psychopathic characters are individuals who are "failures of mental adaptation." They are not feebleminded nor insane, but are clearly abnormal mentally. This group includes the so-called defective delinquents, the moral imbeciles, the constitutional psychopaths and inferiors, and the pathological liars and swindlers. Cases illustrating these types are described.

Prison psychoses is a term "applied to the group of psychotic complexes which can not be satisfactorily classified under any of the regular terms used to denote mental disease entities. . . . The term is of value as it emphasizes the etiologic potential of imprisonment as a provocative agent in the causation of psychotic states requiring hospital care." Citation of cases follows.

Psychoneuroses comprise the minor psychoses, and are responsible for most of the cases of mental disturbance in officers. Neurasthenia, hysteria and various kinds of obsessions are included in this group. Individuals suffering from this type of mental disability are unable to adapt themselves to the conditions of everyday life and so spend their energy in useless conflict. "They can only be eliminated by careful attention to their life history, and if it is found that they have always manifested an abnormal character of reaction, which has persisted in the service, it may be concluded that it is 'constitutional . . . an abnormality of make-up.' They should be passed upon by boards of medical survey and discharged for disability not in the line of duty."

Dr. Sheehan devotes the remainder of his article to a consideration of epileptics, syphilitics, alcoholics and drug addicts in the service, and concludes with a selective list of twenty-three references.

A special feature of the article is a series of reproductions from photographs of individuals illustrating the various types of mental unfitness for military services.

Sheehan, R. Malingering in Mental Disease. U. S. naval med. bull. 10:646–53, Oct. 1916

"Malingering is the effort of an individual to overcome a difficult situation by the production of mental symptoms. There is getting to be a more generally held opinion that it never occurs in normal persons. . . . It is not always

true that malingering is an acutely conscious reaction, as it is often beyond the awareness of the individual, occurring in the subconscious. It is this which makes it difficult to determine which of the symptoms presented are genuine and which malingered. Because of their abnormal make-up these individuals are apt to cause difficulties if they succeed in getting into the military service. Oftentimes they are physically desirable and are enlisted without question. After enlistment, when compelled to contend with service demands and restrictions, because of their psychotic make-up it is not long before they get into difficulties by coming into conflict with authority or by deserting. If this results in placing them under stress, what appeals to them as the easiest way out is to exhibit mental symptoms." Surgeon Sheehan devotes the rest of his article to a citation of detailed cases of malingering in the service.

Sheehan, R. Service Use of Intelligence Tests. U. S. naval med. bull. 9:194–200, April 1915. References

The author describes the Binet tests and comments as follows upon their unfitness for service use. "Stuart states that there is a likelihood of wide discrepancies in the use of these tests when made by different observers. They should not be considered an instrument of precision and will probably never become exact, and Healy . . . says: 'In considering the scientific exactness of results we must remember that there are many delicate possibilities of variation ever present. These may occur through the many varying conditions of the investigator, the one investigated, and the medium of investigation.'"

Since great variance in results is noted with trained workers, as used by untrained examiners these tests are almost valueless. Goddard says: "The attitude of the examiner is all-important." Healy states: "It is very clear that judgment by means of tests as to the possible existence of those abnormal states which constitute insanity is often a matter for those with a highly technical training and experience."

These tests are only indicative and of value when estimated with other considerations. "The Binet system, with its rather cut and dried standards, is useful mainly as an exploratory procedure." Binet himself never intended to measure with the scale general ability apart from schooling.

The high-grade defectives, who are the only ones which come to the attention of the service, evidently need other methods of examination.

"There is little doubt that the best criterion of the adaptability of a candidate for enlistment would be a cross section of his career. However, when he presents himself he is governed by the desire to enter the service, and naturally it is not to be expected that much information will be obtained from him gratuitously which will assist in his exclusion. . . . Here, then, is where the necessity arises for some measure that will appraise him independently of his volition. . . ."

Another criticism that can be made of the Binet system is that it is standardized for children and depends in great measure upon education, so as applied to adults it is useful only as part of an examination. Both Goddard and Kuhlmann have asserted lack of faith in their own revisions of the tests for this class.

As they are essentially tests of the intelligence, they fail to reveal emotional deficiency, which is not evident in mental characteristics. The tests of Healy and Fernald, and the association tests, supply to an extent this lack.

Glueck states that a great deal of justifiable criticism of these tests has been directed against an attempt on the part of some of Binet's followers to supplant entirely the social definition of feeblemindedness by the artificial one made by the test.

Among military prisoners the moron is not found frequently—less than ten in 400 examinations. Epileptics are probably more numerous. Chronic alcoholism, frequently existing previous to enlistment, accounts for many offenders. Habitual drunkenness in psychopathic individuals causes much delinquency. They lack moral sense, judgment and stamina, and the ability to adapt.

It seems that the large majority of service patients in the Government Hospital for the Insane would have, at the time of their enlistment, survived the

intelligence tests. Over fifty-six per cent are cases of dementia praecox, patients who are oftentimes especially bright school children with plenty of knowledge for passing the tests. Since April 1, 1914, careful examination of navy admissions has shown only three feebleminded patients and in only one of these was this the probable cause of admission.

Are we justified in taking twenty-five minutes of the medical officer's time to use a measure that detects only a small part of the undesirables?

To remedy in part these defects in the tests, Surgeon Sheehan suggests a period of probation at the training station for observation and further testing, a procedure which would enable examiners to become skilled in the work, and which would give opportunity for "more than one sitting, which is usually necessary except for testing the clearly feebleminded. It is said that the most serious objection to the time limit comes from the fact that it makes the whole test a stereotyped, rigid, mathematical procedure, which, in the last analysis, reduces the whole method to an absurdity.

"Another point not to be forgotten is the difficulty in devising tests suitable to our purpose, when we have to apply to what is really a cosmopolitan class a measure originally designed for use with a homogeneous people.

"To date it has not been found that any set of mental tests exists which is at all adequate to estimate the capabilities, and these are what we wish to estimate. The modification suggested by Dr. Schier seems to be a move in the right direction, and perhaps with standardization may be useful as a routine measure at the training stations. It should be applied to at least 500 sailors and marines, selecting those who by their actual acts have proven not only that they are intellectually capable, but that they are of sufficient emotional stability to adjust themselves to all conditions of service life. For our purpose, these would constitute normal men. Then compare the results of a similar examination of men who have shown by their actual acts that they are incapable of doing their duty or adapting themselves to these conditions. . . .

"It might be of value to consider requiring a candidate for enlistment to bring with him some evidence that would enable the recruiting officer to judge his history better. This would approximate what some foreign services obtain by their perfected statistics and records."

Sollier, Paul. War neuroses. Bulletin de l'Académie de médecine 73: 682–84, June 8, 1915

Sollier cites statistics from eight hospital centers which show that in about 16.2 per cent of 2,435 wounded soldiers there was evidence of a traumatic neurosis, that is, a total of 395 cases. Excluding those with neuropathic antecedents, only 250 cases are known of a neurosis developing under the stress of war.—J. A. M. A. 65:365, July 24, 1915.

Stier, Ewald. Progress in the Methods for the Care of the Insane in Time of War. Translated from the German by L. L. Smith for the Military Surgeon 30:332–35, March 1912

The first provision Dr. Stier mentions to be made for the care of the military insane in campaign is the securing of a sufficient quantity of quieting drugs, such as hyoscin, trional and veronal, to be carried on the march.

It is provided in the regulations that military surgeons under certain circumstances are required to maintain a special psychiatric service, and that the supply depots should be prepared to furnish these supplies at once. These are as follows:

12 tubs for continuous baths.

20 box or lattice beds.

20 pairs of shoes that cannot be torn.

80 suits made in one piece, not easily torn and buttoning in the back.

A considerable number of dry earth closets should be available, but precautions must be taken to prevent suicides therein, as these are often chosen by insane patients for this purpose.

The staff for the psychiatric department should be chosen as much as possible from sanitary officers and soldiers who have had some training or experience in the management and care of the insane.

"Arrangements for the procuring of railroad cars which are suitable for the transportation of the insane has, until the present time, not been especially provided for. The conversion of the ordinary cars of the hospital train into those especially suitable for this purpose could be arranged without much trouble. . . . The expeditious transportation of the military insane to their destination without changing cars is considerably facilitated by the provision of the regulations which requires that the number of places where the military insane are to be distributed should be especially designated by the line commanders, and that this list should be adhered to continuously throughout the trip. The line officers will then inform the Chief of the Field Sanitary and Transportation Departments of such arrangements." The personnel for the care of the insane during transportation should be as efficient and experienced as possible.

Stokes, C. F. Editorial [on Mental Preparation in the Navy]. U. S. naval med. bull. 7:417–19, July 1913

The slight but continued increase in the number of cases of mental disease in the navy is a subject for serious consideration from the standpoint of service efficiency, as well as from that of pecuniary loss to the government. The number of these cases stated to be not in line of duty indicates the general opinion of medical officers that in the large majority the disease, or the tendency thereto, exists prior to enlistment. The serious problem of detecting and excluding those of unstable mentality is thus presented to the medical examiner.

Under the most favorable conditions, allowing prolonged observation and repeated examination, the determination of underdeveloped or defective mentality in the borderline cases is exceedingly difficult. Familiarity with the conditions and influences to which a medical officer is subjected in recruiting makes it evident that with his narrow cross section of the man's life, consisting of observation for only a few minutes, he can not hope to detect mental obliquities that would show plainly in a longitudinal section covering a month or more.

For those classed as feebleminded various tests, notably the De Sanctis and the Binet-Simon, have been under investigation by psychologists and educators with the purpose of evolving a method by which the mental development of an individual can be determined. An article in this number of the *Bulletin* describes the Binet-Simon test and shows its applicability to service conditions in detecting the feebleminded applicant for enlistment. No value is claimed for this system in diagnosing mental conditions other than feeblemindedness, and even here are certain restrictions that greatly limit its practical usefulness.

Its general adoption, in the present state of its development, is therefore inadvisable, but it marks an advance in our methods and is worthy of further trial by medical officers on recruiting duty, who would do well to familiarize themselves with this method, that they may take advantage of its good features while bearing in mind its limitations.

In this connection it may be pointed out that what is coming to be known as "temperamental fitness" is attracting increasing attention, and certain lectures delivered at the Naval War College during the past year indicate that its important relation to the service is recognized. There are persons whose mental processes do not appear to be individually defective, and yet, when their intellectual activities are applied as a whole, they lack a certain co-ordination of directive force, which lessens their value or completely unfits them for a military career.

That mental equipment and training for the operations of war are at least as important as material preparation should be continually in the minds of all, and this subject deserves more study in order that methods may be developed and standards established whereby the temperamental types can be classified and those who are desirable can be distinguished from those who are temperamentally unsuited for military activities. This study must be applied equally to officers

and men, and it is believed that its active prosecution would be well repaid by the results obtained.

Much can be learned by careful observation of the conduct of officers and men in grave emergencies. The results of such observations should be made matters of record and should be considered along with the temperamental characteristics before assignments to important or independent duty are made. The success of our arms at sea may depend largely upon the temperamental qualifications of the commander-in-chief. It is believed that no officer should be sent to sea who shows a positive Wassermann reaction, and especially should he be prevented from assuming high command. It is a matter of common observation to see cerebral syphilis develop unexpectedly under mental strain, inducing an unbalanced mind that would be likely to lead to disaster.

Thomas, G. E. Second Report on the Schier Test for Mentality, with Special Reference to the Point System. U. S. naval med. bull. 68–70, Jan. 1916

"Since my last report,* data covering the mental examination of 300 prisoners has accumulated. The results obtained in these examinations have been tabulated: first, according to the old system of marking; second, according to the point method suggested by Dr. Schier . . . and third with the view of comparing those found mentally deficient by either or both systems.

"According to the old system of marking, 70 per cent was taken as the passing mark and of 300 examined, 29.6 per cent failed. This result corresponds with my last report in which 28 per cent of 100 prisoners examined failed to pass the 70 per cent minimum.

"By the new point system in which a mark less than 50 per cent is considered indicative of definite mental deficiency, 19.5 per cent of the 300 cases failed."

Tables giving results by the old system and by the new point system, and a comparison of the two, follow. These show that class C of the cases examined by the Schier test—the class of average or doubtful—contains some mental defectives of the serious type.

"It is apparent that if a mental test is to be of any value a definite line must be drawn between the mentally desirable and undesirable, and although no test as yet designed can exactly fulfill this requirement it is believed that a line can be established that will exclude the greatest number of defectives and a minimum of normals. If by such an arbitrary standard we occasionally exclude material that will prove efficient and desirable, but by this same standard, we exclude the great majority of defectives, this weakness is excusable. . . ."

"I am strongly of the belief, based on the results of 500 examinations by the Schier system, that a 70 per cent minimum passing average is not too much to demand of the recruit. There is no doubt that a very small percentage—I do not think more than 3 per cent—of men who would be efficient and valuable to the service would be excluded by this arbitrary standard, but this sacrifice is small indeed when we exclude, which I believe we do, the great majority of the inefficient."

Thomas, G. E. Value of the Mental Test and its Relation to the Service. U. S. naval med. bull. 9: 200–11, April 1915. References

"For the last year and a half much work has been done at the Portsmouth naval prison with the Binet scale for the purpose of determining the mental standard of prisoners. When comparisons were made after several hundred tests had been completed, the idea of the value of this scale in its application to recruiting was advanced. There has been much discussion by psychologists outside the navy and by some of the medical officers in the service, of the value of the Binet system as a means to determine the mentality of the recruit. Kuhlmann has suggested it as being valuable in this relation. Acting Assistant Surgeon Schier has devised a test using some of the Binet procedures. Passed

*See Thomas, G. E., Value of the Mental Test, etc.

Assistant Surgeon McMullin also has been experimenting with a simple system in connection with recruiting. If a mental test is to be applied in the navy, it should be devised for the recruiting officer and should answer the following requirements:

1. It should be fair in its requirements, and a definite minimum passing mark established.
2. It should be sufficiently varied to make evident intelligence, education and training.
3. It should be so devised that but slight, if any, variations are possible in the results of the different examiners.
4. It should not consume much time."

The author then describes results, with tables and illustrative cases, of applying the Binet-Simon and Schier tests, followed by a comparison of the two as to accuracy and relative value. "The results obtained by each system are fairly consistent. The most intelligent who passed the maximum 'Schier' also passed the maximum 'Binet,' and as the average is decreased on the Schier scale it also decreases on the Binet scale until seventy per cent is reached, when some discrepancies creep in." The chief disadvantage of the Binet test is that its results can vary quite widely according to the examiner. On the Binet scale the inaccuracy of the groups over the ten-year grade would make the establishment of a definite minimum, which at the same time is fair in its requirements, impossible.

The Schier test, on the other hand, allows little chance for variations, there being but one well-defined test with a definite minimum.

The Schier test, therefore, more closely fulfills all of the qualifications requisite for use in the navy. It is believed that it is fair and varied enough to determine intelligence, education and training; that its results by different examiners vary but little, if any; that it can be applied by any intelligent person after a little training; and that it consumes not too much time to make it objectionable.

Tombleson, J. Bennett. Series of Military Cases treated by Hypnotic Suggestion. Lancet, Lond., Oct. 21, 1916, p. 707–09

A paper giving in tabular form an account of sixty cases treated by hypnotic suggestion.

"It will be seen that the most successful cases are those of shock psychasthenia of all kinds, while cases of hyperthyroidism and neurasthenia also show very good results. The cases speak for themselves and confirm me in the opinion that practically all the cases of war neurasthenia and psychasthenia can be cured and sent back to work if treatment by hypnotic suggestion is used in reasonable time. Prejudice against this form of treatment does not, happily, exist in the minds of more than a very small proportion of the patients, and my experience has led me to think that it is only found in those whose keenness to return to the war areas is open to considerable doubt.

"So far as I have been able to trace them, the cure has been permanent in my cases, and if the same standard of criticism be applied to these cases and to similar cases treated in other ways, the utility of hypnotic suggestion will be obvious to any fair-minded critic."

U. S. Army. Report of Surgeon-General. 1912. p. 78

The admission rate for insanity for the United States was 1.68 per 1,000 as compared with 1.58 for 1910, 1.63 for 1909, 1.58 for 1908, and 1.79 for 1907. The noneffective rate was 0.46 per 1,000, as compared with 0.32 for 1910, 0.29 for 1909, and 0.31 for 1908.

U. S. Army. Report of Surgeon-General. 1913. p. 76

It is impracticable to compare the admission rate for this class of disturbance with the rate for diseases formerly classified and published under the term "insanity." The diseases included under the term "mental alienation," used in the present nomenclature which was put into use January 1, 1912, includes

several conditions not included under the term insanity, such as defective mental development, constitutional psychopathic state, hypochondriasis, and nostalgia. The case admission rate for this class of diseases was 3.26 per 1,000 and the discharge rate was 2.78. [The admission rate for mental alienation was 3.56 for American troops in the Philippine Islands.—p. 106.]

U. S. Army. Report of Surgeon-General. 1914. p. 100

The admission rate for mental alienation was 4.83 for American troops in the Philippine Islands. In the United States the rate was 2.92. Last year the rates were 3.56 for American troops in the Philippine Islands, and 3.26 in the United States.

U. S. Army. Report of Surgeon-General. 1915. p. 95

The admission rate for mental alienation was 6.24 for American troops in the Philippine Islands. In the United States the rate was 3.83. Last year the rates were 4.83 for American troops in the Philippine Islands and 2.92 in the United States.

U. S. Army. Report of Surgeon-General. 1916. p. 75

The case admission rate for mental alienation (all) for 1915 was 3.04 per 1,000, and the discharge rate 2.54, as compared with 3.83 per 1,000 for the admission rate and 3.02 for discharge rate during the year 1914. The admission and discharge rates for the entire army for 1915 were 3.84 and 3.30 per 1,000, respectively.

U. S. Navy. Report of Surgeon-General. 1913. p. 9. Diseases of the Nervous System

Admissions under this class decreased from 1,015 to 809. Mental diseases occurred in about the same number as in 1911. Epilepsia showed an increase from 87 to 101.

The subject of mental diseases has received the close attention which is warranted by its important relation to service efficiency. Undoubtedly in the large majority of cases the disease or the tendency thereto exists prior to enlistment, and therefore the most important work in lessening its incidence must be done at the recruiting office by excluding the applicant whose defective mental equipment unfits him for the service.

Throughout the world an increasing interest in the subject of mental defectives is manifested, as a result of the realization of the fact that they are increasing much more rapidly than is the population as a whole. The feebleminded constitute the most dangerous element of any community, their defects are not remedied by association with normal individuals, and they are the enemies of law and efficiency. In the service they are frequently at conflict with military discipline and make up a large part of the malefactors; they are victims of mistreatment at the hands of others, and their unstable mental equilibrium is disturbed by small quantities of alcohol. The change of environment consequent upon entrance into military life alone may be sufficient to cause grave mental derangement in such persons.

Detection of the mentally unfit is often a vexing problem even under the most favorable conditions, and the difficulties are increased greatly by the circumstances under which the determination must be made in the recruiting office. Diagnosis of idiocy and low-grade imbecility is not a difficult matter, but the more dangerous high-grade imbecile, moron or moral imbecile, may be physically well developed, may appear mentally alert and bright, yet have latent immoral and criminal tendencies. The exclusion of these types requires most careful study of the applicant, and the great importance, from a military point of view, of the medical examiner's duties has been frequently emphasized. For the detection of those classed as feebleminded the Binet-Simon tests have been employed at one recruiting office, and the indications are that this method will prove to be of value within certain limits.

In this connection the study of late cases of syphilis, in which there are no apparent symptoms, is of the utmost value, not only in the navy but in civil life. It has been found that those so afflicted may, under strain of great responsibility, develop practically any type of mental aberration known to science.

U. S. Navy. Report of Surgeon-General. 1914. p. 8–9

During the year of 1913 there was a slight increase in the rate for mental diseases over the previous year. The following table will show the rate for mental disorders since 1910:

1910 rate for mental disorders	5.20
1911 rate for mental disorders	4.25
1912 rate for mental disorders	3.97
1913 rate for mental disorders	4.11

The rate per 1,000 of those invalided from the service for mental disorders during the year 1913 was larger for the Marine Corps than for the navy, the rate for the navy being 1.81 per 1,000 against a rate of 2.33 per 1,000 for the Marine Corps. About ten per cent of those admitted for mental diseases during the year were surveyed from the service within four months of the time of enlistment. A satisfactory method of detecting the mentally weak is receiving careful consideration by the Medical Department. A modification of the Binet-Simon method with suitable mental tests has been devised by Acting Asst. Surg. A. R. Schier, and his article has been published in the *Naval Medical Bulletin* and also has been published in the form of a reprint by the Marine Corps Publicity Bureau. At the same time careful mental examinations have been conducted by Passed Asst. Surg. G. E. Thomas at the naval prison, Portsmouth, N. H., using the Binet-Simon and other methods.

At the disciplinary barracks, Port Royal, S. C., examinations of this character have also been conducted by the medical officer and the material returned has been carefully studied. The subject has also received careful study by the medical officer stationed at the Government Hospital for the Insane with a view to devising, if possible, some mental test which would eliminate those liable to develop mental disorders or to become offenders against naval discipline.

The detection and exclusion of individuals of this class at the recruiting stations would not only greatly reduce the cost at the prisons and hospitals, but serve as an economic aid to other bureaus having to do with the personnel. This bureau is not satisfied that any of the intelligence tests used up to date are sufficiently exact to do any more than approximate the mental status of the individual under examination. It would appear that where the individual is examined by two or more examiners at different times different results are apt to be established, and while the results may not vary greatly, the difference is sufficient to show the unreliability of the test. Furthermore, the application of this test to 300 prisoners and to persons in the prison guard rated as good soldiers affords results which are disconcerting if we are to place any reliance upon the method. For instance, the results obtained from a group of three sergeants, four corporals, and three privates of the marine guard selected as above the average of efficiency show that the average mental age established was below that of the 300 prisoners under their care. In fact, the medical officer making the examination said that "if the Binet-Simon tests were applied to these men on enlistment and the maximum required, not one of them would have been taken into the service."

Furthermore, some of the prisoners whose records show them to be most undesirable in every way could pass a satisfactory examination by the Binet-Simon method, and would thus have been admitted to the service.

It therefore appears that the intelligence tests applied up to date are not satisfactory in determining the individual's degree of mentality, independent of other considerations.

The problem is one of considerable interest to the bureau because of its economic bearing on the service and the present lack of any satisfactory method of determining the mental status of the applicant for enlistment. Results which

would justify a recommendation for the adoption of any system have not yet been accomplished; but the investigation will be continued until the advisability or inadvisability of adopting a mental examination before enlistment is determined.

U. S. Navy. Report of Surgeon-General. 1915. p. 13–14

The admissions for these disorders show no change from those of the preceding year.

1910 rate per 1,000 of personnel	5.20
1911 rate per 1,000 of personnel	4.25
1912 rate per 1,000 of personnel	3.97
1913 rate per 1,000 of personnel	4.11
1914 rate per 1,000 of personnel	4.11

The occurrence of cases of mental disease in the service is comparatively slight; among a personnel of 67,141, admissions were 276, the fireroom force leading with 52 (4.26 per 1,000), marines 50 (5 per 1,000), and apprentice seamen 32 (14.10 per 1,000). The prevention, detection, and care of the naval insane is not our main problem in connection with this subject. The mentally unfit betrays himself by his inability to successfully cope with service conditions that his comrades find usual and normal. As Passed Asst. Surg. H. E. Jenkins says, "such persons are unable to accustom themselves to their environment, which is frequently changing. They have very little regard for discipline, not realizing that such a thing is absolutely necessary for an efficient military organization. From their comrades they receive considerable ridicule and as a result are greatly depressed. . . . They are a continual source of annoyance to their superiors, can not be trusted in performing duties where any ordinary ability is to be used, and are absolutely misfits."

Undoubtedly some few of the 276 admissions entered the service entirely sound mentally, and from some stress or worry lost even their normal balance. But the great majority must have entered the service with this bias already actually or potentially established. This subject was discussed in my last annual report, and the hope was expressed that ultimately the subject would so crystallize that a practical and efficient working method could be devised to eliminate these undesirables on their first application for entry into the service. Interesting reports made to the bureau were published in the April, 1915, number of the United States *Naval Medical Bulletin*, from Drs. Sheehan, Thomas, Jenkins, and Schier. I am more inclined to believe that these hopes will be realized and that from observations already made, aided by further developments, a scientific classification according to mentality may be devised, which will be practical in its application, and economical in its time consumption, which will prevent the entry of the unfortunates into the service and incidentally eliminate the hitherto undetected defectives now in the ranks.

Such a procedure, the result of deliberation and tabulating of results by the navy's experts in collaboration with the many others in civil life now showing an active interest in the subject, could be officially adopted as a test to be used routinely should time allow, and if the pressure of work at recruiting stations at times was hampered thereby, could be more thoroughly carried out on receiving ships or at training stations.

Such tests can, however, never become exact measures, or accurate instruments of precision, and even if the most rigid adherence to directions is given, the equation of the varying examiners will influence results. But the sum total must be improvement. The service may lose good men, but many men will be kept out whose acceptance would be detrimental.

The standing of a naval career as a calling is constantly being elevated, and with such progress and its universal recognition the standard of those applying for enlistment constantly improves and their numbers increase. By an appropriate coincident elevation of the requirements the personnel will automatically keep pace in better moral, mental, and physical advancement.

Welch, W. H. Medical Problems of the War. Bull. of Johns Hopkins Hosp. 28: 154–58, April 1917

"The Maudsley Hospital is entirely for the reception of cases of so-called shell-shock. I don't think there is any group of cases so pathetic as these. I saw a ward with perhaps twenty-five soldiers, who were all victims of this terrible condition. They stand up when the physician makes his rounds. Most of them had continuous tremor with staring eyes, a look of terror, and blue, cold extremities. When examined they show various manifestations which we are not apt to attribute to hysteria. Some are deaf and dumb and some are dumb. The disorders of the special senses are most remarkable. The condition is described under various names, such as shell psychasthenia or shell neurasthenia, but it is commonly called shell-shock. So far as one can judge, they look on the whole to be rather inferior types both physically and mentally. I was told they were of the type that can not stand alcohol and were total abstainers in about 80 per cent of the cases. Two of the patients had never been wounded. There has been a good deal of discussion as to how many of the patients may be malingerers, and this has to be considered most carefully. There is no doubt an element of malingering in some of them, but it is impossible that the greater majority of them should be of this type. These conditions are tremendously interesting to the psychologist. I found Dr. Sherrington, of Oxford, devoting much attention to them. He called them disassociation of special senses. Meyer's view is that they are inhibitions from a tremendous disturbance of the consciousness of the personality of the individual, so that various nervous tracts are blocked for the time being. Some of the patients are treated by hypnotic suggestion with a good deal of success. Dr. Sherrington was telling me of a case in which the patient had been anesthetized and was cured by the anesthesia. Sometimes, when the patients go under the anesthetic, they regain their speech, and sometimes they begin to talk when they are coming out of it. Then they can continue to speak."

White, William A. Application of Psychiatry to Certain Military Problems. U. S. naval med. bull. 8: 1–16, Jan. 1914

A lecture giving suggestions as to the problem of "temperamental fitness of men in the naval service," and to assist in enabling the department to better adjust the individual to the specific things that will be demanded of him in time of war.

Dr. White takes up first the question of preventing enlistment of defectives as recruits. As these defectives are not easily recognized at time of enlistment, a three months' probationary period, which now precedes completing of enlistmenti n the army, was found desirable. He advocates giving all men with a history of repeated offenses a mental examination, as these offenses usually testify simply to mental deficiency and not to wilful misdemeanor.

"The greatest number of mental breakdowns come in the first enlistment, which of course means that as the enlisted man becomes better accustomed to service conditions and has shown in the first instance his ability to fit into the situation, he is more apt to be the man who will go along in the organization without further trouble.

"As at present constituted both branches of the military service have various tests along the line, various opportunities for advancement dependent upon study, good record, and again tests in the way of examinations, and at each one of these tests a certain number of men are eliminated, so that as we go up from the lowest in the ranks to the petty officers, warrant officers and the commissioned officers we have on the way the constant weeding-out process. . . .

"In the first place, such studies as have been made and such statistics, as we might expect, show a considerable increase in the number of mental disorders under actual war conditions. Not only this, but they indicate very distinctly that certain latent tendencies are brought to light by these stresses. We find, for example, an increase in the number of alcoholic psychoses, an increase in the number of psychoses due to syphilis of the nervous system, and an increase

in the psychoses of metasyphilis, namely, paresis. . . . Certain recommendations stand out from this situation with a fair degree of clearness. In the first place . . . nobody to whom the term alcoholic could be properly applied should hold a position of commanding importance. . . . The same applies to the syphilitic. . . . "At the Russian Psychiatric Hospital at Harbin, during the Russo-Japanese War, the percentage of paresis among those brought back from the front was 5.6. . . . It seems evident that its development must have been hastened by war conditions, a conclusion which is borne out and re-enforced by the further fact that among the soldiers from the front who were under treatment there were evidences of syphilis in 20 per cent, while among other soldiers under treatment evidences of syphilis were only present in 1.6 per cent. . . . If either one of the conditions of alcoholism or syphilis is serious, then it goes without saying that their combination is doubly so."

Dr. White devotes the remainder of his article to a study of the "temperamental fitness" of the officer from a psychological point of view.

Wiltshire, H. Contribution to the Etiology of Shell-Shock. Lancet, Lond., June 17, 1916, p. 1207–12

Early in the war attention was drawn to the results of the use of powerful explosives upon the nervous system. These became manifest in a condition, which, for want of a better term, was called neurasthenia and later "shell-shock." The syndrome was so frequent that many believed it to be malingering or imitative, while others regarded it as hysterical. In any case, the subject is important. There is no doubt that the past history of the individual influences the character of the symptoms displayed. The physical traumata are also contributory and it is probable that there is somewhere a break in the chain of neurons governing the particular functions involved. It seems that the syndrome is most likely to occur when, to the effects of shock conditions, are added previous long continued anxiety and nervous exhaustion. This implies a certain cerebral instability. It is noteworthy that the mental confusion, inattention, fatigue and hallucinations are the symptoms heretofore ascribed to cortical injuries.

The writer concludes that the wounded are practically immune from shell-shock, presumably because a wound neutralizes the action of the psychic cause of shell-shock, that exposure and hardship do not predispose to shell-shock if troops are well fed.

While it is theoretically possible that physical concussion resulting from shell explosion might cause shell-shock, it is certain that this must be regarded as an extremely rare and unusual cause.

Chemical intoxication by gases generated in shell explosions can not be more than an exceptional cause of shell-shock.

Gradual psychic exhaustion from continued fear is an important predisposing cause of shell-shock, particularly in men of neuropathic predisposition. In such subjects it may suffice to cause shell-shock *per se*.

In the vast majority of cases of shell-shock the exciting cause is some special psychic shock. Horrible sights are the most frequent and potent factor in the production of this shock. Losses and fear of being buried are also important. Sounds are comparatively unimportant.

Consideration of the causes and frequency of relapses favors an original cause of a psychic nature. Any psychic shock or strain may cause a functional neurosis, provided it be of sufficient intensity relative to the nerve resistance of the individual.—R. Sheehan, U. S. Naval med. bull. 11: 242–43, April 1917.

Classification of War Neuroses

By Major A. F. Hurst, R.A.M.C.

(Guy's Hospital Gazette, London, March 24, 1917. Vol. XXXI. No. 749, p. 109)

A. PREDISPOSING CAUSES

(1) The congenitally nervous or "martial misfits" (2) A previous attack of neurasthenia	(3) A previous mental breakdown (4) Chronic alcoholism	(5) Concussion even years before

B. EXCITING CAUSES	Resulting Neuroses	Treatment
(1) Exhaustion due to: (a) Mental and physical strain (b) Toxaemia of acute and chronic infections (c) Insufficient food (d) Excessive heat (e) Pain and toxaemia of wounds	I. *Neurasthenia* (nervous, suprarenal and occasionally thyroid exhaustion)	Rest, followed by graduatedexercise; sometimes adrenalin or thyroid
	II. Soldier's Heart	
(2) Emotion due to: (a) A single horrible incident (b) Prolonged andrepeatedhorror, fear, etc. (c) Constant pain from a wound	III. *Psychasthenia* (amnesia; obsessions; phobias; tics; nightmares with secondary headache, insomnia and tremor	Suggestion with or without hypnosis
	IV. *Hysteria* (convulsions, tremors, paraplegia)	Persuasion, re-education, rarely hypnotic suggestion
	V. *Hyperthyroidism, hyperadrenalism* with harmonic form of "Soldier's Heart."	Rest, opium, belladonna Quiet and isolation
	VI. *Exaggerated Defensive Reflexes* (especially "auditory jump" and "visual flinch" reflexes)	
(3) Explosion of high power shells (a) Concussion i. Aerial ii. Contact (burial, sand bags, etc.) (b) CO poisoning	VII. *Shell-shock:* an organic basis (concussion symptoms) often with superadded hysteria (paralysis, deafness, mutism, blindness, etc.)	Rest for organic basis; persuasion and re-education, rarely hypnotic suggestion, for hysteria

C. CONDITIONS PREDISPOSING TO THE DEVELOPMENT OF SPECIAL SYMPTOMS	Resulting neuroses	Treatment
(1) Family or personal history of Epilepsy	VIII. *Epilepsy*	Bromide
(2) Mental deficiency (3) Mental disease	IX. *Insanity*	
(4) Syphilis	X. *Cerebral syphilis:* Tabes: General Paresis	Hg.: K. I.: Salvarsan
(5) Ocular defects, already present or produced simultaneously	*Asthenopia* and headaches *Hysterical blindness*	Glasses Hypnotic suggestion
(6) Aural defects, already present or produced simultaneously	*Hysterical* deafness; tinnitus	Hypnotic suggestion
(7) Previous or simultaneous injury of a limb	*Hysterical* paralysis, spasm or tremor of the limb	Persuasion and re-education
(8) Previous speech defect (stammering, aphonia, mutism)	*Hysterical* mutism, aphonia, stammering	
(9) Excessive smoking	*Tremor;* "Soldier's Heart"	
(10) Passed emotional disturbances or illnesses, which may since have been forgotten; these may influence III, IV, VI, and VIII		

Burton-Fanning, F. W. Neurasthenia in Soldiers of the Home Forces. Lancet, Lond., June 16, 1917, p. 907–11. Report of the Medical Research Committee

"This communication is entirely based on experience gained at the First Eastern General Hospital, Cambridge, where I was serving prior to going overseas with my present unit. Its object is to draw attention to the predominance of neurasthenia as a cause of going sick amongst our newly recruited soldiers. I use the term in its widest sense to include disorders of the nervous system which are believed to have no organic basis. . . . During the last ten months I have had charge of a number of medical beds in the First Eastern General Hospital which had carried from time to time between 120 and 180. Into these beds 2,240 patients have been admitted in the ten months, of whom 640 came in convoys from overseas and the remaining 1,600 were from Home Forces. Out of this last number 509 were thought by me to be suffering from neurasthenia and to be free from any organic disease. It would appear, therefore, that, speaking from an experience of ten months in a Territorial Force Base Hospital, nearly one-third of the admissions into medical wards from Home Forces are for neurasthenia. . . . This communication only deals with soldiers of the Home Forces, but I should like to allude to the fact that neurasthenia forms a part or the whole of the disability of an astonishing number of men invalided from overseas."

Burton-Fanning then gives a picture of the neurasthenic soldier, tracing his troubles from the uncurbed nervous temperament and habits of boyhood through the strange and uncongenial, and sometimes terrifying, experiences of wartime to the final breakdown.

Symptoms and signs of the neurasthenic are then discussed. Special stress is laid upon the fact that symptoms in such cases are never limited to one region or organ, but are of widespread distribution. This should be the first point made in diagnosis.

Patients' chief complaints and the diagnosis with which they came to the hospital are next taken up in the order of frequency as follows: so-called "rheumatism," or "neuritis," or "gastritis"; pain in the heart, inability to draw a deep breath, proneness to giddiness or actual fainting, probably caused by a panicky emotional state; "lung disease," and bladder trouble. The writer states that, in his experience with war neuroses, he has found throat affections and those of the sexual organs rare.

Prevention is next discussed, and emphasis laid upon correct diagnosis by the physician so as to disabuse the patient's mind of any idea of organic trouble. The writer thinks that in general the prevention of neurasthenia comes within the sphere of education. All classes are affected, but few of his patients, he finds, have had a public school education, and so have not had the benefit of that "atmosphere in which character and manliness are developed side by side with learning, and which seems to prevent neurasthenia."

Treatment and prognosis are briefly discussed. "Treatment seems to resolve itself into an attempt to remove from the mind whatever is the disturbing influence. The doctor's first task, therefore, is to gain the patient's confidence and discover the nature of his troubles." For this, patience and experience in cases of this kind are necessary. Occupation for neurasthenic patients is usually better than rest as a form of treatment. As a rule it is better to return the neurasthenic to work at home or behind the lines where he can be of real value. He can rarely make of himself a real soldier.

Eder, M. D. War-Shock; the Psychoneuroses in War; Psychology and Treatment. Lond., Heinemann, 1917. 154 p.

This book is based upon a study of a hundred consecutive cases (psychoses excluded) which came under the author's observation while he was in charge of the psychoneurological department at Malta. The larger number were ad-

mitted directly to the special department of which he was in charge. The following are the author's "conclusions":

(Chapter 8, p. 144–45)

(1) War-shock is hysteria occurring in a person free from hereditary or personal psychoneurotic antecedents, but with a mind more responsive to psychical stimulus than the normal.

(2) The wrenching from the customary calling and life, the new discipline, the peculiar and terrible mental strain of modern war-conditions acting upon this sensitive mind determine the disease among soldiers.

(3) In 100 consecutive cases of psychoneurosis 70 per cent correspond to this description; 30 per cent have neuropathic antecedents, hereditary or personal; the latter correspond more closely with the psychoneuroses seen in civil life.

(4) Shell-shock, gas-poisoning, or other physical injuries do not cause the disease. The symptoms are protean—palsies, analgesia, amblyopia, mutism, deafness, affections of the vegetative system such as the soldier's heart, vomiting, diarrhoea, insomnia, loss of memory, somnambulism, phobias and obsessions of all kinds.

(5) These symptoms are the result of mental conflicts or other mental phenomena; all the symptoms can be understood in terms of the mind without any reference to physiopathology.

(6) The psychopathology of war-shock is that of the psychoneuroses, and the mechanisms those discovered by Freud in hysteria.

(7) War-shock is not a new disease; it is a variety of hysteria where the one factor (the psychic trauma) is overwhelmingly large in relation to the second factor (predisposition); it is separated from non-war-shock cases in degree, not in essence.

(8) The treatment par excellence is hypnotic suggestion, the suggestion by preference being directed to the complex as determined from the psychological examination and general psychoanalytic conclusions.

(9) 91.5 per cent of cases of war-shock were cured by this method and 8.5 per cent improved. Of soldiers with previous neuropathic antecedents, who were cured, 27.6 per cent improve and 10.4 per cent are unaffected. Cure is very rapidly effected; most cases are well in less than two weeks, some in a few minutes or hours.

(10) The usual objections to hypnotic suggestion do not apply to war-shock by reason of the absence of neuropathic antecedents.

(11) All methods of treatment, other than psychoanalysis, are based on suggestion, including "spontaneous recovery," persuasion, reasoning, symptomatic treatment, electrotherapy, etc. The objection to these indirect forms of suggestion is that they are less effective (more uncertain and less rapid) than suggestion under hypnosis.

(12) The earlier the patients are treated by this method the better.

(13) The majority of war-shock patients so cured can return to the front in three to six months.

(14) Cases of "functional" disease should not be discharged from the army until cured.

Hotchkis, R. D. Renfrew District Asylum as a War Hospital* for Mental Invalids; Some Contrasts in Administration; with an Analysis of Cases Admitted During the First Year. J. of mental science, Lond., 63: 238–43, April 1917

Following is the first part of Dr. Hotchkis's paper; the second part deals with a clinical analysis of the cases treated:

"The first intimation, in the form of a request to the District Board made through the General Board of Control for Scotland, that Dykebar was wanted as a war hospital for mental diseases, was given in November, 1915, and after this request had been unanimously agreed to by the District Board, certain

* Dykebar War Hospital, Paisley, N. B.

financial questions had to be settled, the details of which I need not enter into. . . .

"At the same time there had to be carried through the transfer of the parochial patients to other institutions, which involved a considerable amount of work, both to the General Board of Control and to the staff here, and also, I am afraid, to some of my audience to whom they had to be sent. The more serious cases were transferred to the nearest asylums, namely, Hawkhead and Riccartsbar, and the new cases from the county are being sent either to Smithson or Riccartsbar, which was the arrangement before Dykebar was built. By the end of the first week in January, 1916, all the patients had been cleared out, with the exception of twenty-five men who were retained for farm and other outside work, and who are accommodated in the reception block, which is a small building quite separate from the others. The two classes of patients are thus kept separate, though as a matter of fact in outside work the two often fraternize, but the soldier always assumes command. The transfer of the patients was carried out without a hitch, due to the excellent work of the Transport Section of the Red Cross Society, and to the providing by the military authorities of an ambulance train when parties of about one hundred had to be transferred. . . .

"I will now describe shortly the increase and organization of the staff in the different departments to meet the new conditions.

"*Kitchen.* Instead of one cook and one kitchenmaid, a superintendent and assistant superintendent and six kitchenmaids were engaged. We were fortunate in securing as superintendent a lady with first-class qualifications and previous experience in a military hospital. As the patients are encouraged to work in every department, there are, as a rule, about six working regularly in the kitchen. Owing to the fact that the military scale of diet is more generous than under ordinary circumstances, some additions had to be made to the cooking apparatus of the kitchen.

"*Laundry.* The laundry had just been enlarged, so no difficulty has been experienced. Owing to the extra work, seven extra laundrymaids were engaged to replace the female patients, and in addition there are as a rule about nine or ten soldier patients who work there.

"*Store.* There is not much change, except that certain articles of food, as meat, bread, and flour are sent from the Army Stores Department at Greenock, the other provisions being obtained under contract as formerly. The ordinary books required by the General Board of Control have still to be kept, but the method of ordering stores, sending back empties, etc., has to be according to army regulations. The accounts are paid by the Finance Committee of the District Board, who, to meet expenditure, have to send a requisition to the Command Paymaster each month for what is necessary. The accounts have to be approved of by the General Board of Control.

"*Pack store.* The pack store is a most important part of a military hospital. On admission the clothes of the patients are all cleaned if necessary, mended, and carefully put away, any deficiencies being made up from the pack store, as everything that a soldier requires in the way of clothing has to be kept there—for example, the hospital clothing, service clothing, and civilian clothing for discharged soldiers—and in the inventory a complete history of every article has to be kept with scrupulous exactness. Rigid rules and forms hedge in all that has to do with army clothing, and the disappearance in transit or otherwise of any garment or accessory is the prelude to an endless correspondence. In this hospital the gallery of the ordinary store is used as the pack store, and in addition three or four hundred racks were put up in the tailor's shop for the patients' clothing on admission.

"*Office.* This corresponds to a regimental orderly room. Under former conditions one clerkess did the work comfortably; now it takes the full time of four, and they sometimes have to work late and on Sundays. Army forms and methods are very complicated, and they give one an idea of the vastness of the organization controlled by the War Office. When I first had to study them, I felt like going back to school without the elasticity of youth.

"*Nursing staff.* The matron, as has always been the case in this institution, is over the whole of the nursing staff, both orderlies and nurses. The kitchen and laundry departments are also under her. There was no head attendant to be made sergeant-major, and though it was prophesied that a sergeant-major for purposes of discipline amongst the orderlies was a necessity, the present system works admirably. There are three assistant matrons, two on day and one on night duty.

"The orderlies are composed of three classes according to their engagement:

"(1) The former attendants, eleven in number, all of whom have been enlisted in the R. A. M. C., the charge attendants having been made sergeants and the second charges corporals.

"(2) Orderlies, twelve in number, engaged by me on behalf of the District Board for the duration of the war and paid by that body. They also are enlisted into the R. A. M. C., and are mostly men over military age or unfit for active service, and among them are some experienced asylum attendants. They do not contribute to the Superannuation Act, and they could be added to at any time if suitable candidates present themselves.

"(3) Regular R. A. M. C. men, two sergeants, two corporals, two lance-corporals, and twenty-one privates, who were sent from various units, and who could be recalled at any moment. They have the ordinary army pay and allowances and also get 6d. per day extra as mental attendants if found satisfactory.

"As regards female nurses, of whom there are twenty-one, the difficulty at first was to know how many wards could be staffed entirely by them. The present arrangement is that the East hospital, which is divided into two adjoining wards with a total of forty-nine beds, has been put in charge of nurses both by night and day, though an orderly is always there during the day for bathing and shaving the patients, etc. There are a certain number of cases requiring treatment in bed in this ward, and the cases include most varieties of mental disease, many of them being in a convalescent stage, but still requiring a certain amount of observation.

"One of the villas consisting of seventy-five beds is also under nurses, and the cases there are patients not yet ready to be discharged, but who can be allowed a certain amount of liberty. I am quite satisfied with the work done by the nurses in these two buildings.

"At the beginning, in addition to the two mentioned, another villa was staffed by nurses, but the patients sent there were more difficult to manage and it did not work so well. Ultimately the charge nurse married one of the patients on his discharge, and as discipline was somewhat relaxed the villa was placed under orderlies. There are no nurses in the north wing of the west hospital as most of the very acute cases are there, but there are two nurses in the south wing. One of the villas is also without nurses, but all the others have either one or two, and their duties are chiefly connected with the kitchen and dining-hall, and they take entire charge of the food. In doing this they have the assistance of several patients for whom they are responsible. The night staff consists of one assistant matron who is responsible for every part of the institution, three nurses, one charge orderly with the rank of sergeant, and ten orderlies.

"*Medical staff.* My duties as superintendent remain as before except that the clerical work is far more than in a civil mental hospital.

"There was some difficulty at first in obtaining a medical staff, but, thanks to the exertions of Dr. John Macpherson, one of the Commissioners, the services were secured of Dr., now Capt. Buchanan, the Medical Superintendent of Kirklands Asylum. There are also on the staff Capt. A. Ninian Bruce, Lecturer on Neurology at the University of Edinburgh, and Dr. Dawson, Medical Superintendent of Ponoka Asylum, Alberta, Canada. The Pathological Department is in charge of Capt. Bannerman."

Hotchkis, R. D. Renfrew District Asylum as a War Hospital for Mental Invalids; Some Contrasts in Administration; with an Analysis of Cases Admitted During the First Year. J. of mental science, Lond., 63:243–49, April 1917

The first part of Dr. Hotchkis's paper deals with administrative matters and is abstracted elsewhere (q.v.). The second part presents a clinical analysis of the 942 cases admitted from January 24, 1916 to January 31, 1917. Of these 111 were sent from the expeditionary force. Dr. Hotchkis confines his observations to the expeditionary cases, among which were five German prisoners of war.

The following were the diagnoses made:

		No.	*Per cent*
Manic-depressive		188	21
Manic type	31		
Depressive type	133		
Stupor	7		
Mixed type	17		
Alcoholic		152	18
Mental deficiency		151	18
Confusional		134	16
Dementia praecox		118	14
Catatonic form	11		
Paranoid form	14		
Simple form	93		
Paranoia		44	5
General paralysis		22	2
Other organic brain conditions		5	Less than 1
Epilepsy		7	" " 1
Secondary dementia		7	" " 1
Not insane		4	" " 1

The author makes exceedingly interesting comments on the cases of each type. Most of the alcoholics were delirium tremens, contracted while home from the front on leave. Some others were old alcoholics, who broke down as soon as their supply was cut down in the army. Others did well until exposed to shell fire. Of 45 soldiers admitted who had cut their throats, 18 were alcoholics. The defectives were divided into classes, the "vicious" and the non-delinquents. Of the 37 "vicious" nearly all were habitual criminals and were usually sent from other hospitals, where they had been giving trouble. Of the rest nearly all had been able to earn a living in civil life in some simple calling. In several cases they were regarded as more dangerous to their comrades than to the foe, on account of not understanding the mechanism of their rifles. Some of them were not permitted, on this account, to load their rifles in the trenches. One, while on sentry duty, was asked by an officer what he would do if the enemy appeared. He precipitated his military downfall by answering, "Pass, friend; all is well." Many of the defectives had confused episodes, which soon cleared up.

Many of the paranoiacs had been insane before enlistment. They were found among the older soldiers (35 to 40). The writer does not feel that the data on the 22 cases of general paralysis justify an opinion on the part played by military service in bringing on the disease in the syphilitic.

With one exception (a traumatic case), all the epileptics had had the disease before enlistment. The author regrets that the inelastic classification of the army did not permit him to classify the mentally unstable. He uses the term extensively, however, when cases are discharged from the army.

The following table shows the disposition of 500 cases discharged:

	Total	*No.*	*Per cent*
Total cases discharged	500		
Sent to asylums		139	27
Returned to duty		155	31
Discharged as recovered		40	8
Sent to their friends		111	22
Died		11	2
Escaped		2	

NOTES AND COMMENTS

Legislation

Arizona

A child welfare act has been passed providing for the establishment of a child welfare board in each city of Arizona.

Bill to establish a school for the feebleminded failed to pass.

Bill to enlarge the State Asylum for the Insane by having an insane criminal ward at the State Prison passed the Senate but died in the House at the end of the session.

California

Legislature of 1917 has appropriated $10,000 for the construction of a tubercular hospital at the Stockton State Hospital.

$30,000 has been appropriated for the construction and equipment of a cottage for female patients at the Agnews State Hospital.

$45,000 for the construction of a cottage for disturbed patients at the Stockton State Hospital.

$45,000 for the construction of a workers' cottage for men at the Agnews State Hospital.

$45,000 for construction and furnishing of a cottage for disturbed patients at the Southern California State Hospital.

$10,000 for the construction and furnishing of a superintendent's cottage at the Norwalk State Hospital.

$36,700 for construction of farm buildings at the Norwalk State Hospital.

$50,000 for the construction of an administration building at the Norwalk State Hospital.

$135,000 for the construction of three cottages for patients at the Norwalk State Hospital.

$15,000 for the building of a nurses' home and an industrial building at the Southern California State Hospital.

$58,000 for the construction and equipment of two cottages at the Napa State Hospital.

$54,750 for new construction at the Sonoma State Home, of which $15,000 is for a cottage for low-grade adult females.

Chapter 184 of the laws of 1917 provides for the transfer of inmates between state hospitals, and to and from the State Home for Feebleminded and the state hospitals.

Chapter 223 of the laws of 1917 authorizes the Board of Trustees of the Whittier State School to maintain a department of clinical diagnosis.

This department will make examinations not only of inmates of the Whittier School but of patients in any other institution when requested. The department is also instructed to inquire into the causes and consequences of delinquency and mental deficiency, and related problems.

A bill introduced during the 1917 session to establish a psychopathic hospital in San Francisco failed of passage.

The Stockton State Hospital has received an appropriation of $60,000 for the purchase of 483 acres of land to be used for farming purposes.

Chapter 776 creates a second institution for the feebleminded to be located in Southern California and to be known as the Pacific Colony. This act defines a feebleminded person as one who is incapable of managing himself or his affairs independently, or of being taught to do so, and who requires supervision for his own welfare or the welfare of others; or one whose intelligence will not develop beyond the level of the average child of twelve years. It provides for the detention and examination of a child brought before the juvenile court if he appears to be feebleminded. The superintendent may admit temporarily for purposes of observation persons suspected of being feebleminded. In case there are vacancies at the Colony the board of trustees may admit, without judicial commitment, epileptics of any age. The Colony is to have a department for clinical diagnosis, classification and observation of inmates. The board of trustees may discharge, or the superintendent may grant a temporary leave of absence to any inmate at any time. Before an inmate who has been committed to the Pacific Colony is discharged, he may be sterilized, if he is feebleminded or afflicted with incurable chronic mania or dementia. This act carries an appropriation of $250,000.

Colorado

A bill was passed changing the name of the Colorado State Insane Asylum to the Colorado State Hospital.

The State Home and Training School for Mental Defectives, at Ridge, has received an appropriation of $35,000 for the construction and equipment of four cottages.

Connecticut

A bill has been passed providing for the transfer of insane, feebleminded, or epileptic persons by order of the court making the original commitment, on the written application of the superintendent from whose institution the transfer is to be made, this institution to pay the cost of the order and transfer.

Provides for emergency admissions for insane, for a period of ten days, to a private or public institution for the insane without the order of any court, upon a certificate by a reputable physician. If further

treatment is required, the person in charge of the institution shall cause commitment proceedings to be begun at once.

Provides for voluntary admission upon the written request of the patient.

The legislature has authorized the establishment of a state reformatory for women.

Bill to consolidate Connecticut Colony for Epileptics and the Connecticut Training School for Feebleminded into one institution to be called the Mansfield State Hospital passed.

Delaware

The state Commission for the Feebleminded, appointed recently by Governor Townsend, is looking for a suitable location for the school for the feebleminded which has been authorized by the legislature. A site of at least a thousand acres is desired.

District of Columbia

Congressman Tinkham of Massachusetts has introduced a bill (H. R. 1768) providing for the feebleminded in the District of Columbia as follows:

To establish a school and home for feebleminded persons of the District of Columbia, to be known as the Columbia Training School; said school to be under supervision of the Commissioners of the District of Columbia.

Authorizes the Commissioners to purchase land not to exceed 1,500 acres situated in Maryland or Virginia.

Appropriates $500,000 for the land and buildings.

Commissioners to appoint seven citizens of the District of Columbia as a board of control.

At least one of this board is to be a physician with special experience in mental diseases and mental deficiency.

Provides for the commitment of feebleminded persons of not less than six years of age, after a petition has been filed with the clerk of the Supreme Court, setting forth the facts, and after a hearing before the court.

Pending the hearing of the petition, an alleged feebleminded person shall not be detained in any place provided for detention of persons charged with, or convicted of, criminal or quasi-criminal offense.

The hearing shall be by the court and two physicians, or one physician and a psychologist, to be appointed by the court, who are residents of the District of Columbia.

The guiding and controlling thought of the court throughout the proceedings is to be the welfare of the person and the welfare of the community.

If the person is adjudged to be feebleminded, court may appoint a guardian, or direct that he be sent to a private institution, or be placed in the school and home which this act provides.

Provides for discharge, and transfers to Government Hospital for Insane.

Provides for penalty for any one who contrives to have any person adjudged feebleminded unlawfully, and for any violation of this act.

Provides for examination of a child brought before the juvenile court to see if he is feebleminded, and that he be detained in a place of safety pending the hearing.

That the buildings shall be on the cottage plan.

That in addition to such persons as may be committed to this institution by the Supreme Court, feebleminded persons and epileptics between the ages of six and twenty-one years may be admitted upon application of parents or guardians, provided parents or guardians guarantee expenses, and also if the person is feebleminded or epileptic in the opinion of the superintendent of the institution.

Owing to an agreement that only war measures should be considered in the extra session of Congress, this bill will receive no attention until next December, when it will be pressed for favorable consideration.

Florida

A bill before the legislature to establish a second hospital for the insane in southern Florida was defeated by one vote.

A resolution has been introduced in the House calling for a committee of three citizens to be appointed by the governor, to investigate and report to the next legislature regarding the location and erection of a new hospital for the insane.

Illinois

Illinois is the first state in the Union to create by law the position of state criminologist.

The Civil Administrative Code divides the civil administration of the state government into nine departments, as follows: The department of finance, the department of agriculture, the department of labor, the department of mines and minerals, the department of public works and buildings, the department of public welfare, the department of public health, the department of trade and commerce, and the department of registration and education.

The department of public welfare has the following officers: Director, assistant director, alienist, criminologist, fiscal supervisor, superintendent of charities, superintendent of prisons, and superintendent of pardons and paroles.

Indiana

Chapter 56 of the acts of 1917 authorizes the deportation of a non-resident insane, feebleminded, epileptic, or poor person to the state or country of his legal residence, or to the state or country from which he came to Indiana.

A bill introduced in the 1917 session which authorized the voluntary admission of patients to the state hospitals for the insane failed to pass.

A law has been passed providing that the state be reimbursed for the maintenance of an inmate at the Village for Epileptics, at the School for Feebleminded Youth, at the hospitals for the insane, or any other state institutions when such inmate has an estate not needed for the support of near relatives. This amount is not to exceed four dollars per week and is to be collected quarterly.

A committee composed of a member of the board of trustees of each state institution has been provided which is to arrange for the joint purchasing of supplies for the state institutions "whenever such purchasing shall seem advisable."

A bill providing for the mental and physical examination of school children passed the House but failed in the Senate.

A state-wide prohibition act was passed in the 1917 session of the Indiana legislature. This law becomes operative on April 2, 1918.

The Eastern Hospital for the Insane has received an appropriation of $25,000 for colony extension and improvement, and $33,000 for a cottage for women.

The School for Feebleminded Youth, at Fort Wayne, has received $12,700 for colony farm, heating plant and equipment.

The Indiana Village for Epileptics has received an appropriation of over $200,000 for new construction. This will provide for 2 cottages, each for 20 females; 4 cottages, each for 35 females; and 2 cottages, each for 29 males.

Bills aiming to control venereal diseases, to require health certificates for marriage, and to prohibit the sale of habit-forming drugs failed.

Iowa

Bill to establish a state psychopathic hospital to be located at Iowa City and to be connected with the College of Medicine of the State University of Iowa failed.

The State Hospital and Colony for Epileptics will receive $105,000 for the construction and equipment of additional cottages, $20,000 for a cottage for tuberculous inmates, and $75,000 for two dining halls and kitchens.

The hospitals for the insane at Independence and at Clarinda have each received an appropriation of $40,000 for a hospital for tuberculous patients.

The state institution for feebleminded has received an appropriation of $40,000 with which to construct and furnish a building for boys.

Chapter 282 of the laws of 1917 establishes the Iowa Child Welfare Research Station, and authorizes an appropriation of $25,000 annually for its maintenance. This station is to be an integral part of the state university. Its object will be the "investigation of the best scientific methods of conserving and developing the normal child, the dissemination of the information acquired by such investigation and the training of students for work in such fields."

Kansas

A new Board of Administration has been created composed of three members with the governor an ex-officio member. The board is to appoint a business manager to have charge of all state educational, charitable, and correctional institutions.

The Larned State Hospital has received an appropriation of $35,000 for the construction and equipment of a cottage, $5,000 for a residence for the superintendent and $7,500 for a kitchen and equipment.

Maine

A law has been passed requiring that cases of venereal disease occurring among inmates of state, county, or municipal, charitable and correctional institutions be reported to the State Board of Health. The board is authorized to provide laboratory facilities for free diagnosis and to furnish treatment at cost.

Chapter 40 of the laws of 1917 amending Section 2 of Chapter 64 of the Revised Statutes of Maine, inserts the word "feebleminded" after the word "insane" so that the section reads, "No insane or feebleminded person or idiot is capable of contracting marriage."

Chapter 88 of the laws of 1917 provides for the transfer of inmates of the reformatory for women to either of the state hospitals for the insane or to the institution for feebleminded, in case they are adjudged to be insane or feebleminded.

A law has been passed extending the period of parole of patients from the state hospitals from six months to an additional six months upon application.

Chapter 120 of the laws of 1917 amending the commitment of the insane, provides for the reception and temporary detention of a person who has been examined by municipal officers pending the issue of a certificate by them stating his insanity, residence, etc. If the person

is alleged to be insane, the superintendent may receive him without the certificate, provided he receives a copy of the complaint and the physician's certificate.

Massachusetts

Chapter 48 of the laws of 1917 extends the period of parole from six months to a year of inmates of institutions over which the Massachusetts Commission on Mental Diseases has supervision. This applies to the insane, feebleminded, epileptic, inebriate and drug addicts in public and private institutions.

Chapter 223 of the laws of 1917 provides that a person admitted to the Massachusetts School for the Feebleminded and the state school at Wrentham for observation upon the written request of his natural or legal guardian, shall not be detained longer than thirty days to determine if he is feebleminded.

Chapter 232 of the laws of 1917 extends temporary care without commitment to persons addicted to the intemperate use of narcotics or stimulants. Hospitals are permitted to admit such persons for a period not exceeding fifteen days for treatment on the application of a physician, a member of the board of health, or a police officer of a city or town, by an agent of the institutions registration department of the city of Boston, by a member of the district police, or by a wife, husband, guardian or in case of an unmarried person having no guardian by the next of kin. At the end of fifteen days the patient must sign a request to remain, must be committed or must be discharged.

The Committee on Public Institutions referred to the next legislature the resolve for building and equipping cottages at the Sherborn Reformatory to provide for the study of psychopathic women.

The bill to authorize the sale of the Northampton State Hospital failed to pass.

Chapter 115 of the laws of 1917 authorizes the Massachusetts Commission on Mental Diseases to "develop, extend and complete a statewide system of psychopathic hospital service by establishing new hospital and out-patient units in connection with existing and future state hospitals under the supervision of said commission."

Minnesota

The legislature has appropriated $65,000 to the School for Feebleminded for a custodial cottage for girls.

Voluntary admission of patients suffering from mental disease is provided for in a bill passed by the 1917 legislature.

The state farm for inebriates at Willmar has by legislative enactment been changed to a hospital for the insane.

A bill has been passed giving the Board of Control powers of local guardianship over children committed to its care. A Bureau of Child Welfare has been created in the Board of Control, and local boards of child welfare are authorized in various counties.

Missouri

A section of the State Prison Board Act which establishes a state prison board of three members, provides that no persons who are idiotic or insane shall be committed to the Missouri Reformatory or be received by the superintendent of this institution.

An item which would appropriate $55,000 for the construction and equipment of a custodial building at the Missouri Colony for the Feebleminded and Epileptics, was vetoed by the Governor.

Montana

The legislature of Montana has passed an act appropriating $2,000 to be expended by the Board of Education for the purpose of investigating the condition of the feebleminded, deaf and dumb.

A law has been passed creating a division of child welfare under supervision of the State Board of Health.

Nebraska

A prohibition amendment to the constitution of the State of Nebraska, adopted at the general election held in November, 1916, became operative May 1.

The following appropriations for the hospitals for the insane in Nebraska are worthy of mention: $143,000 for new construction and improvements for the hospital at Lincoln, $117,000 for new construction and improvements for the one at Norfolk, $12,000 for additional lands for agricultural purposes at this institution, and $25,000 for improvements for the hospital at Ingleside.

The Institution for Feebleminded Youth, at Beatrice, has received an appropriation of $63,000 for a new cottage for girls, an addition to the hospital building, and the construction of a new well and improvements and equipments for the power house.

New Hampshire

The Board of Control of Public Institutions has just been reorganized. The Board will hereafter consist of five instead of ten members. The governor becomes an ex-officio member.

The institution for the feebleminded at Laconia has received an appropriation of $58,000 from the legislature which is to be used in the construction of a dormitory for feebleminded women of child-bearing age.

A sterilization law has been passed making sterilization permissible by any surgeon with the consent of the person, his guardian, or relatives.

A bill authorizing the voluntary admission of patients to the state hospital has been passed.

Chapter 56 (1917) provides that the board of trustees of state institutions may transfer to the state hospital, temporarily and for purposes of observation, any prisoner who has been committed to the state prison, who may be suspected of insanity.

Chapter 103 (1917) provides that institutions receiving persons of unsound mind, or for the treatment of specific diseases, must secure a license from the state board of health.

Chapter 112 (1917) creates a board of trustees of state institutions for the management of the state hospital, the school for feebleminded, the industrial school, the state sanatorium for consumptives, and the state prison. The board is to consist of the governor and four others, appointed by him, with advice and consent of his council.

Chapter 141 (1917) provides that the New Hampshire School for Feebleminded Children may retain inmates after the age of 21 years if it seems to be for the best interests of the community.

New Jersey

The legislature has passed a bill which requires reporting to the State Department of Health all cases of venereal disease, and authorizing the department to establish quarantine measures if necessary. A second bill makes it a misdemeanor for any one infected with venereal disease to marry.

A law has been passed providing that there are to be at least two women members on the board of managers of the state hospitals for the insane in addition to the present members.

A law has been enacted creating a commission of five to investigate conditions in the state charitable institutions, to inquire into the best methods of centralizing control, the question of the transfer of inmates and other improvements.

Chapter 34 of the laws of 1917 provides $5,000 for physical and mental examination of all prisoners who are now confined in the New Jersey State Prison at Trenton and for a classification based on the result of these examinations.

New York

Chapter 503 of the laws of 1917 requires that each party when applying for a marriage license must sign a statement that to his or her knowledge he or she has not been infected with any venereal disease, or if so infected within five years that he or she has had a laboratory test within that period showing that he or she is free from such disease.

The Sage Bill, creating a Hospital Development Commission, has been signed by the Governor. This commission will consist of the State Engineer, Chairman of the State Hospital Commission, State Architect, Chairman of the Senate Finance Committee, Chairman of the Assembly Ways and Means Committee, one member of the legislature who shall also be a minority member of one of the financial committees of the legislature, and two members to be appointed by the Governor. The commission is to examine each site of hospital development in the state now owned by the state or which may be later developed; to investigate the capacity of the present state hospital buildings; to consider the future policy of the state in regard to the care of its insane; to adopt a general plan of hospital development; to estimate the probable cost of the plan; to submit a comprehensive plan for the development of each hospital site; to recommend to the legislature each year an expenditure equal to one-tenth of the cost of the plan when completed; and to investigate the problem of the proper care of the feebleminded.

This bill appropriates for construction $299,254.85 for the Utica Hospital, with an additional authorization of $950,745.15, and $100,000 for the hospital at Middletown, with an additional authorization of $269,000.

The Appropriation Bill provides $898,470 for the state hospitals, with an additional authorization of $417,000. The Brooklyn, Central Islip and Manhattan State Hospitals will be benefited most by this appropriation, which is for new construction.

The Appropriation Bill provides $614,500 this year and authorizes in addition $529,600, for new construction at the state institutions for the feebleminded and epileptics. This will provide for one additional cottage at the State Custodial Asylum for Feebleminded Women, at Newark; for the completion of four cottages and the construction of eight additional cottages at Letchworth Village; for the construction of dormitories to replace Letchworth House at the Craig Colony for Epileptics, besides other construction and permanent betterments. At Letchworth and Newark there will be approximately nine hundred additional beds provided.

Chapter 354 (1917) establishes a board of child welfare for Dutchess County. The board is to have powers and duties with respect to destitute, neglected, delinquent and defective children under sixteen years of age. The term defective child applies to one who is insane, epileptic, idiotic, imbecile, feebleminded, blind, a deaf mute, or physically crippled. One of the duties of the board is to provide for mental and physical examination of any child coming under its care or supervision who is suspected of mental or physical defect or disease. Another duty is to co-operate with the state institutions in ascertaining the home conditions, habits and character of the parents before a child is discharged,

and to make recommendations as to the advisability of returning the child to his home. When it seems unwise to have the child returned to his home, he may be paroled into the custody of the board.

Chapter 553 of the laws of 1917 provides that the board of education of each city and of each union free school district shall within a year ascertain the number of children attending the public schools under its supervision who are retarded mentally three years or more. In case there are ten children or more thus retarded, special classes of not more than fifteen each must be established for their education.

Chapter 431 of the laws of 1917 places greater restriction than formerly upon the sale of habit-forming drugs. This law becomes effective August 1.

North Carolina

Chapter 150 (1917) provides for a consolidated board of directors for the hospitals for the insane. It also creates a purchasing committee for these institutions and for the school for the deaf, school for the blind, and the Caswell Training School.

Chapter 154 (1917) provides for the issuance of bonds to an amount not to exceed $3,000,000—$500,000 a year from 1917 to 1922 inclusive —proceeds to be used for state educational and charitable institutions, for permanent improvement and equipment. The State Hospital at Raleigh is to receive $200,000, the State Hospital at Morganton $200,000 and the State Hospital at Goldsboro $125,000.

A law has been passed in the 1917 session providing for the appointment of a guardian for an infant, idiot, lunatic, inebriate, or an inmate of the Caswell Training School, after a hearing, upon application of anyone to the clerk of the courts.

The legislature has passed an act providing for the establishment of a reformatory for women.

In the case of women convicted of sex offenses, commitments are to be for not less than 30 days or not more than three years.

The bill provides for the parole of inmates and also for the employment of a physician.

North Dakota

Senate Bill No. 90 which was passed March 16, 1917, locates the asylum for insane, which was authorized by the amendment of the Constitution of North Dakota approved by the electors of the state at the last general election, at or near Rugby, in Pierce County.

Senate Bill No. 191 has been passed, prohibiting and restricting the selling, prescribing or having possession of habit-forming drugs.

The legislature passed, but the Governor vetoed, a bill which would add insanity to the list of causes for divorce.

Ohio

Legislature appropriated $250,000 to erect eleven cottages, $24,000 for equipment for the new cottages, and $25,000 for a tuberculosis hospital, at the Columbus School for the Feebleminded; $270,000 was appropriated to erect eleven cottages at the Ohio Hospital for Epileptics at Gallipolis. No appropriation was made for furnishing these cottages. By these appropriations 650 additional feebleminded and 600 additional epileptics will be provided for.

The legislature appropriated $100,000 for a building and $12,000 for equipment for the Bureau of Juvenile Research. As soon as the building is completed, all juveniles committed to reformatories, correctional institutions, the Institution for the Feebleminded, etc., will go to the Bureau of Juvenile Research to receive mental and physical examination. After thorough examination they will then be sent to the institution considered best adapted to their needs.

The Bureau will be located at the State Home for Feebleminded and will be under the direction of Dr. E. J. Emerick, superintendent of the Home.

Oregon

Chapter 354 provides for examination in County Court by the judge and two or more competent physicians, or two or more competent physicians and psychologists, of feebleminded or criminally inclined persons of over five years of age.

If the person is judged to be feebleminded, the judge shall commit him to the State Institution for the Feebleminded.

A copy of the order of commitment together with the personal and family history, shall be mailed immediately to the superintendent with a full copy of the report of physicians.

A person committed is to be conveyed by a member of his family or by a trained attendant of the institution in the same manner as is provided for the insane.

The expense of conveyance is to be borne by the county from which he is committed.

Allows for private detention and supervision if relative or guardian agrees to guard and supervise satisfactorily to the Court.

During the pendency of a hearing, no person convicted of delinquency or a crime, where judge believes person is feebleminded, shall be detained in any place provided for the detention of persons charged with, or convicted of, any criminal or quasi-criminal offense.

If any proper party shall be dissatisfied with finding of County Court, he shall have right to appeal to Circuit Court, and procedure will be same as before County Court.

Provides that County superintendents of schools make reports on June 1, and December 1 to County Court of names and addresses of all pupils and children of school age who are mentally defective, except that in school districts of the first class the city superintendents shall make said reports.

Superintendent of Institution for the Feebleminded may require a re-examination of any inmate, and if examination shows he is no longer a fit subject for the institution he may be transferred to a suitable institution or discharged.

Superintendent shall require an examination of any inmate upon written request of relative or guardian, relative or guardian to pay cost of examination.

County must provide suitable clothing from time to time in case parents or relatives can not.

A bill has been passed providing for transfer of patients to and from the state hospitals, the industrial and training schools, and the institution for the feebleminded.

Chapter 279 creates a State Board of Eugenics composed of the State Board of Health and the superintendents of the two state hospitals for the insane, the state institution for the feebleminded and the state penitentiary.

This Board is to examine into the innate traits, the mental and physical conditions, personal records, family traits and histories of all persons reported by the superintendents of the institutions.

If in the Board's judgment, procreation would produce children with an inherited tendency to feeblemindedness, insanity, epilepsy, criminality, degeneracy, and if there is no probability that the condition of the person examined will improve, or if the physical or mental conditions of such persons may be improved thereby, then the Board shall direct the superintendent of the institution to perform or to cause to be performed such type of sterilization as may be deemed best by the Board.

This is not intended as a punitive measure but for the betterment of the inmate or to protect society from the menace of procreation by this inmate.

Provides for appeal from the decision of the Board on the part of the inmate or his guardian, the decision to be made by the court.

Pennsylvania

A commission, named a year ago by the governor to study into the subject, has recommended that the state provide for the feebleminded blind as well as for the other blind. It recommends three classes of ten each at the institutions at Polk, Elwyn and Spring City.

A bill authorizing the directors or overseers of the poor to provide a building or rooms for the care, treatment and maintenance of persons temporarily mentally deranged has been passed.

An appropriation of $250,000 has been made by the 1917 session of the legislature for the commission appointed by the terms of an act passed in 1913 to provide for the selection of a site and the erection of a state institution for the care of inebriates. This bill makes provision for the commitment to and the discharge from this institution.

A bill has been enacted which provides for the selection of a site of not more than 500 acres and the erection of buildings for a state hospital for the insane to be located east of the Allegheny Mountains and to be known as the Eastern Hospital for the Insane.

South Carolina

A bill to establish a school for the feebleminded white persons of South Carolina, carrying an appropriation of $60,000, failed to pass.

South Dakota

The name of the South Dakota Hospital for the Insane has been changed by legislative enactment to the "Yankton State Hospital."

Sterilization bill has been passed to prevent "procreation of idiots, inebriates, imbeciles, and feebleminded persons."

The superintendent of the State Home for the Feebleminded is authorized to examine the mental and physical condition, records, and family histories of inmates to determine whether it is inadvisable to allow such to procreate, and to make an annual report of the examinations to the State Board of Charities and Corrections.

The Board, with the superintendent, must carefully examine the record of each inmate, and if a majority decide that procreation by any would produce children with a tendency to disease, feeblemindedness, idiocy, or imbecility, or if his condition would be improved thereby, then the physician of the institution or one whom he selects shall perform the operation.

The superintendent of the institution is to keep a record of all who are operated on with data and notes of observation regarding its benefits, and to report annually to the governor.

House Bill No. 59 which has been enacted, provides for the transporting of a non-resident inmate of the State Hospital for the Insane to the state of his residence, and particularly to a similar institution of such state.

The legislature has appropriated $22,000 for the purchase of one hundred sixty acres of land adjoining the farm at the hospital for the insane at Yankton. This institution has also received $40,000 with which to continue the construction of the Women's Infirmary, $7,000

for building and furnishing two cottages, and $5,000 for the construction of a pavilion on the park grounds of the hospital.

The State School and Home for the Feebleminded, at Redfield, has received an appropriation of $120,000 for the completion of the main building. The 1913 legislature appropriated $30,000 for this building.

Chapter 93 appropriates $10,000 for investigation, plans and specifications for the erection of buildings at the Northeastern Hospital for the Insane, previously established and located at Watertown. This institution will be designated as the "Watertown State Hospital."

Tennessee

The legislature of Tennessee has enacted a child welfare law to regulate the care of dependent and delinquent children, and all institutions and agencies dealing with them.

Texas

The Texas legislature has appropriated $400,000 for the building of a new hospital for white insane persons to be known as the Northwest Texas Insane Asylum. The hospital is to accommodate at least 1,000.

Chapter 198 of laws of 1917 provides for a hospital for colored insane persons at Rusk on the property now held by the state and used in part for a penitentiary, to be known as the Hospital for Negro Insane. As soon as practicable all insane negroes who are confined in other hospitals for the insane or in jails will be transferred to this institution, and negroes will be committed to it.

The board of managers, superintendent, officials and physicians, and as many of the other employees and attendants as practicable are to be white persons. It provides for erecting new buildings and remodeling old ones and carries an appropriation of $200,000.

Utah

The bill providing an institution for the feebleminded failed to pass.

Vermont

Chapter 115 creates the office of Director of State Institutions. The director is to be appointed biennially by the governor with the advice and consent of the senate. He is to have under his supervision the Vermont State Hospital for the Insane, the Vermont State School for Feebleminded, state prison, house of correction and industrial school and is to render a report at the end of the biennial period showing the work done, conditions and needs of these institutions, together with a report of receipts and expenditures.

A Board of Control has been created to have control of all boards and departments and institutions of the state.

The board is to be composed of the governor, state treasurer, auditor, director of state institutions and an additional member to be appointed by the governor.

It is to hold monthly meetings and the different departments of the government are required to make monthly reports to it.

The appointment of all assistants of any department is subject to the approval of the board.

The compensation of all the assistants of the departments is subject to the approval of the board except those whose pay is determined by state law.

This board with the chairman of the finance committee in the senate, of the ways and means committee and the committee on appropriations in the house are to prepare a budget to submit to the legislature.

Director of State Institutions is a newly created officer to take over the work previously done by the board of penal institutions, trustees of the state hospital for the insane and trustees of the school for the feebleminded.

He is authorized to establish detention farms, with the approval of the Board of Control, where persons now confined in jail may be detained.

A Board of Charities and Probation has been created. This is an unpaid board and has supervision over dependent delinquents and neglected children committed to it by the juvenile court. Has the power of investigation over all public charities. Administers the probation law of the state.

The appropriation bill provides for the erecting and equipping of a girls' dormitory at the State School for Feebleminded Children.

West Virginia

Bill for the establishment of a school for the feebleminded failed to pass.

Wyoming

Chapter 2 of the laws of 1917 is an act to submit to the voters of Wyoming, at the next general election, an amendment to the constitution providing for the prohibition of the manufacture, sale and keeping for sale of intoxicating liquors. This amendment if carried would be effective on January 1, 1920.

Chapter 95 of the laws of 1917 appropriates $5,000 for additional farm lands for the Wyoming State Hospital for the Insane, at Evanston.

The Chief of Police at Berkeley, California, has planned a school of special instruction for the police of Berkeley. Paul Jerome Anderson has been appointed instructor in psychiatry. White's "Outlines of Psychiatry" is to be used as the textbook in psychiatry.

Recommendations of Indiana Commission on Mental Defectives

The commission appointed a year ago by the governor to study problems of mental defectiveness in Indiana recently reported:

1. Over a thousand persons lack proper treatment because of insufficient accommodations in state hospitals.
2. Recommends new buildings on grounds of present hospital, or if possible farm colonies.
3. Recommends increasing capacity of the Indiana village for epileptics from 305 to 1,200, especially increasing the accommodations for women.
4. Recommends that all general hospitals provide wards for observation and detention pending commitment.
5. Recommends that no cases be placed in jail.
6. Recommends law authorizing voluntary commitments.
7. Recommends amending commitment law for the feebleminded so as to allow of admission of feebleminded male adults as is now provided for feebleminded women.
8. Recommends enlarging the school colony for feebleminded at Fort Wayne by establishing a colony in the southern part of the state on a site of not less than a thousand acres.
9. Recommends separate classes for mentally retarded children.
10. Recommends mental examination for all school children.

The physicians of the Webster County Medical Association in session at Fort Dodge recently passed a resolution condemning the methods of procedure in insane cases in Iowa. In their opinion it is absurd for a court or jury of non-medical men to decide such cases. They suggested that an appeal board should be created of which three superintendents of state hospitals should be members.

The Iowa State Medical Society recently passed a resolution instructing the president of the association to appoint a committee of three to confer with a committee of the State Bar Association for the purpose of drawing up a bill, making the determining of the sanity or insanity of a person, a physician's duty. Under the present law, a person being tried for insanity is taken before a court and the judge determines whether the person is sane or insane, irrespective of the verdict of the examining physician.

The school board of Baltimore is considering plans for the establishment of clinics in the various schools in the city for the treatment of children who are mentally and physically defective.

Over twenty-five hundred visits were made by social service nurses in connection with state hospitals for the insane in Massachusetts during a recent period of three months.

A committee on the conservation of child life has been appointed by the State Health Commissioner of Massachusetts. Among the consulting members are Dr. Walter Fernald, Superintendent of the Massachusetts School for the Feebleminded, and Dr. William Healy, formerly Director of the Psychopathic Institute of the Chicago Juvenile Court, recently appointed to the position of Director of the Psychopathic Department of the Juvenile Court in Boston, established under the Judge Baker Foundation.

The New York State hospitals are conducting twenty-six mental clinics at the state hospitals and in neighboring communities. The average attendance is about 500 a month.

A clinic for mental diseases and mental defects for children in the public schools of White Plains, New York, has been successfully conducted for the past three years by the Bloomingdale Hospital. The teachers are asked to refer to the physicians any child who seems to be defective or abnormal in his behavior. The clinic is held one afternoon each week in one of the school buildings.

It is reported that the state of New York is expending annually $2,000,000 in support of 9,000 aliens who have been committed to the state institutions.

Development at Randall's Island

The Advisory Board of the Children's Hospital and School on Randall's Island, which was appointed in 1916 by the Honorable John A. Kingsbury, Commissioner of Public Charities of New York City, in a recent report made the following recommendations:

1. The study, diagnosis and classification of newly admitted cases and the establishing of close relations with the schools, courts and social agencies of New York City.
2. Education to fit the defectives for life in other institutions.
3. Education for supervised community life.
4. Permanent care for feeble young children with greatest defect and the higher grade cases who can help in the operation of the institution, but whom it is unsafe to return to the community.

The Board further recommended that the institution be made an educational rather than custodial institution; that the population be limited to 2,500 and for the present to 2,000; that nearly all the old buildings be destroyed.

The Board of Estimate appropriated $600,000 last year and $1,000,000 has recently been granted. This sum will provide for 11 new cottages.

The city of Akron, Ohio, is considering establishing a city school for the feebleminded.

The state institutions of Ohio are planning to raise this year sufficient farm products to provide for their 22,000 patients.

About 4,500 insane are reported in the Philippines of whom about 800 are cared for in institutions for the insane. These are mostly the criminal insane and violent cases, but it is hoped that a pavilion for milder cases will be built at the San Lazaro Hospital. There are two hospitals for the insane in the Philippines, both of which are in Manila. One is a church institution, and the other the regular government hospital.

With a view to protect the race against venereal disease, the Canadian National Council of Women, who met at Winnipeg, passed a resolution urging the provincial governments to make it a law that before marriage licenses should be granted, health certificates must be produced.

Four mental clinics have been established this winter and held monthly by the medical staff of the Kalamazoo State Hospital, Michigan, under the auspices of the juvenile courts assisted by the nursing service of the charitable organizations who conduct the follow-up work.

The government of Ontario is being urged to establish two industrial farm colonies, one for girls and one for boys. These are to accommodate 500 pupils of the higher grades of mental defectiveness and to train them for self-support. The aim is educational rather than custodial.

A school for feebleminded colored children will be opened this fall in connection with the hospital for the insane at Petersburg, Virginia, under the direction of Doctor Drewry.

Psychologists and the War

Psychologists are united in an effort to render their professional knowledge and skill serviceable to the nation in its military need.

A general Psychological Committee has been organized by the National Research Council. This Committee, under the chairmanship of the President of the American Psychological Association, Prof. Robert M. Yerkes of Harvard University, represents the National Society of Psychologists in the Council for Defense of which the National Research Council is now a department.

The Council of the American Psychological Association has voted that the resources of psychological laboratories be made available for work on psychological aspects of military problems. Almost without exception institutions and individuals have responded favorably and enthusiastically to this suggestion. The Council has also authorized the organization of several committees to deal with special topics in

military psychology. A list of these committees, with their special tasks, will indicate the scope of the work in which the psychologists of the country are interested:

Preparation of bibliographies and abstracts of psychological literature relating to military affairs. Chairman, Prof. Madison Bentley.

The preparation of methods for the psychological examination of recruits. Chairman, Prof. Robert M. Yerkes.

The selection of men for tasks requiring special skill. Chairman, Prof. E. L. Thorndike.

Psychological problems of aviation, including the examination of aviators and the relation of the aviator to mechanical factors. Chairman, Dr. H. E. Burtt.

Psychological problems of incapacity, especially those of "shell-shock" and re-education. Chairman, Dr. S. I. Franz.

Psychological aspects of vocational advice and training. Chairman, Prof. John D. Watson.

Psychological problems of recreation in the Army and Navy. Chairman, Prof. George A. Coe.

Pedagogical and psychological problems of military training and discipline. Chairman, Prof. Charles H. Judd.

Problems of motivation in connection with military service. Chairman, Prof. Walter D. Scott.

Problems of emotional stability, fear and self-control. Chairman, Prof. Robert H. Woodworth.

Acoustic problems of military importance. Chairman, Prof. Carl E. Seashore.

Visual problems of military significance. Chairman, Prof. Raymond Dodge.

The Maudsley Hospital, London

Eight years ago Dr. Maudsley offered a large part of his fortune to the London County Council to build this hospital for early treatment of mental diseases. After much obstruction and delay the present admirable site at Denmark Hill was secured and the hospital built. With the consent of Dr. Maudsley the Council permitted it to become a section of the 4th London General Base Hospital; at present it is adapted to the treatment of 175 soldiers and eighteen officers suffering with "shell-shock," neurasthenia or acute mental disorder. The pathological laboratory at Claybury has been transferred to the Maudsley Hospital, and the director, Major F. W. Mott, continues to carry on the pathological work of the London County Asylums, while at the same time he takes an active part in the medical work and the general management of the hospital. When the King and Queen recently visited the Maudsley Hospital they expressed themselves as well pleased with the accommo-

dation and general arrangement for the treatment and comfort of the soldiers.

A large hut is now being constructed in the grounds to be equipped for carpentry, cabinet-making and metal work, under a capable instructor, as a means of treatment by useful diversion of the mind of convalescent cases of shell-shock. The whole, together with upkeep, has been generously provided by Lady Henry Bentinck.

The hospital will be taken over by the London County Council after the war is over. The Nineteenth Annual Report of the Asylum's Committee says that "the most forcible argument for the provision of the hospital from the point of view of the patient lies, as it seems to us, in the fact that it will provide opportunity for individual treatment and close personal attention, which are all important in the early stages of mental disorder," also, "in the proposed hospital only those patients will be detained for whom treatment is necessary and who respond to it." Hence there will be in the hospital an entirely different atmosphere, as Dr. Maudsley has expressed it, of sanity as opposed to insanity. The hospital will be essentially an institution for providing treatment, the direct object of which will be the care and discharge of the patient.

The report refers to the advantage of having such a hospital in the London area, and points out the public utility of an out-patient department where persons in the incipient stages of mental disorder can be taken for advice and treatment. "We are hopeful that this provision by the prevention of insanity will afford relief to the rates." The report also attaches importance to the value of the hospital and pathological department as a center of education and research. Expectation is expressed that the hospital will prove of great value in the dissemination of knowledge of mental disease and in the provision of systematic instruction in methods of treatment. The report says, "At present the study of insanity is to a great extent an isolated branch of medical research, and the general practitioner knows little of what is considered to be the province of the alienist and neurologist. This is not to the advantage of the public, and if this unfortunate isolation were removed and a close acquaintance with nervous and mental diseases were more common, many cases of incipient insanity which now find their way ultimately to the workhouse and the asylum might be recognized at an earlier and more hopeful stage, and by preventive as well as remedial measures, might be so dealt with as never to need institutional confinement." "A hospital in close touch with the University, the general hospitals and their medical schools, and with a central pathological laboratory should do a great deal to bring this about. The teaching of the hospital should also increase the supply of trained medical officers available for service in the asylums." Editorial, *British Medical Journal*, January 13, 1917.

New International Periodical

A new periodical—the *Archives Suisses de Neurologie et de Psychiatrie*—began publication with the new year. Its contents are in the three national languages of Switzerland—French, Italian and German. It is intended to be an international organ, the collaboration of foreign workers to be accepted, and the periodical to serve as a medium of communication between those who under existing conditions are prevented from corresponding in the journals of their respective countries. The Editor is Professor Constantin von Monakow of Zurich, who has Drs. Dubois of Berne, Weber of Geneva, Maier of Zurich and Manzoni of Tessin as collaborators. The new periodical is published by Orell-Fussli of Zurich.

New English Journal on Re-education of Disabled Soldiers

Recalled to Life is the title of a journal devoted to the care, re-education, and return to civil life of disabled sailors and soldiers, the first number of which has just been issued under the auspices of the War Office of Great Britain, the Pensions Ministry and the Red Cross and Order of St. John of Jerusalem Joint War Committee. Lord Charnwood is the editor and Everard Cotes assistant editor. The publishers are John Bale Sons and Danielsson, Oxford House, London.

The editors in their introduction say: "It is the purpose of this journal to diffuse as widely as possible among those who are in any way concerned with the welfare of our soldiers and sailors returning disabled from the war, and not less among such sailors and soldiers themselves, knowledge as to the means by which they may be restored, as nearly as the nature of their injuries permits, to full participation in, and full enjoyment of, the activities of civil life."

A preliminary survey of various restoration agencies is given in articles by authorities, with descriptions of the work being done in restoration to health, provision of training facilities for learning new trades, and finding of employment for those who need such assistance. The articles are illustrated by reproduction of photographs of the men at work in the shops and classrooms of the various restoration agencies.

Among the contributors are Sir Alfred Keogh, G.C.B., Director-General of the Army Medical Service for the Anglo-Belgian Committee; Sir Arthur Griffith-Boscawen, M.P., Parliamentary Secretary, Ministry of Pensions; Colonel Sir Robert Jones, C.B., Military Inspector of Orthopedics, and Captain Basil Williams.

Ontario Military Hospital, Cobourg

The Hospital for the Insane at Cobourg has been converted into a military hospital, to be known as the Ontario Military Hospital, Cobourg. Extensive alterations have been made in the interior of the building in

order to provide proper facilities for the treatment of mental and shock cases. On the ground floor two bathrooms, each equipped with two continuous flowing baths, have been added, and adjoining each bath-room is the massage-room, equipped with marble massage slab, shampoo faucets, etc.

In the basement four treatment rooms have been provided. One room is set apart for electric treatment and is equipped with a high-frequency machine and a treatment wall-board. In another room are continuous flowing baths and an electric-hydric bath, together with apparatus for the application of faradic, galvanic and sinusoidal currents. A third room is equipped with a controlling table of marble arranged with mixing chambers with the necessary hot and cold water supply valves for the control of the Scotch douche, needle sprays, waves, showers, etc. In this room are also located electric light and hot air baths, as well as marble massage slab.

Another room is set apart as a dressing and rest room, and is equipped with the necessary beds, blanket warmers, etc.

Dr. F. S. Vrooman, Assistant Superintendent at the Brockville Hospital for the Insane, has been appointed medical superintendent, and Dr. H. A. MacKay, Resident Physician at the Ontario Reformatory, Guelph, and formerly of the Toronto Hospital for Insane, has been appointed assistant.

The city of Treviso in Italy has organized a hospital, with 100 beds, for special treatment of nervous and mental affections among the troops. Professor Zanon, director of the insane asylum for the province has been placed in charge of the new war psychiatric hospital.

Psychiatry and Neurology in the French Army

The *Revue Neurologique* for November–December, 1916, contains besides the usual reviews and interesting special case reports of the Paris Neurological Society, a series of condensed reports of the work of the neurological, psychiatric and neuro-psychiatric centers under military control in France. Familiar names appear. Déjerine has one "militarized" neurological service at the Salpêtrière and Pierre Marie another. Babinski has a similar service at the Pitié and Souques at the Hospice Paul-Brousse.

Reports from various military regions and sectors appear. H. Français reports from the neurological center of the 2nd sector and the 3rd region at Évreux, and Claude from the neurological center of the 8th region at Bourges. Other regions are represented as follows:

The	9th (Tours)	by Vincent
	10th (Rennes)	by Chiray
	13th (Vichy)	by Lortat-Jacob
	14th (Lyons)	by Sollier

15th (Marseilles) by Sicard
16th (Montpellier) by Grasset and Villaret
19th (Algiers) by Porot.

The 6th army also has a neurological center controlled by Guillain. Roussy reports from several neurological centers in connection with various armies, having been shifted about by the circumstances of war.

But in addition to these militarized neurological services in Paris and elsewhere, the regional neurological centers and the army neurological centers, it is interesting to find that the important psychiatric side of the war gets its representation in the nomenclature. For example, there is a center for psychoneuroses in the military government of Paris, created in 1915 by the late Professor Ballet and now directed by Laignel-Lavastine.

The 14th region (Lyons) besides having its neurological center under Sollier, has its psychiatric center (Centre de Psychiatrie) directed by Lépine.

The 16th region besides having its neurological center at Montpellier, has a so-called neuro-psychiatric center directed by Mairet. The 18th region (Rochefort) has an annex assigned for physiotherapy and neurology.

Moreover, one of the armies, the 2nd, has its neuro-psychiatric center directed by Léri, who reports that 91 per cent of all the nerve cases including the organic ones in the period from July to October, 1916, could be sent back to the front and only 9 per cent evacuated to the interior. Among these patients were, besides functional cases, a number of curable organic cases. "Who knows," says Léri, "how many neuroses are created and fixed in the hospitals of the interior which have begun in slight organic disorder?"

The army whose number is censored at Épinal has also a neuro-psychiatric center. The reports from these centers occupy 147 pages. Following the reports of scientific activities of these neurological and psychiatric centers is an interesting report of a meeting of the Paris Neurological Society at which the chiefs of the military neurological and psychiatric centers discussed the question of invaliding and compensation.

Omitting the details of the reports that deal with neurology in a narrower sense, we may enumerate briefly the psychiatric matters of interest which appear in these reports from the centers.

Even the centers called neurological deal with important psychiatric matters. So-called physiopathic disorders have begun to figure (Pierre Marie), including various painful neuritides, obstinate contractures (mains figées, Meige), a sort of motor torpor of the hands. Neuropathic troubles are reported by Marie as less frequent in the Paris centers now that they have begun to be treated immediately after their

appearance in the army neurological centers. Marie commends treating them with firmness and tenacity. Complaint is made that nervous invalids fill up the beds in the neurological services to the detriment of the curable wounded. "Accordingly there ought to be," says Marie, "special institutions for chronic victims of nervous disorder."

Babinski finds new support for his older opinions concerning hysteria. A book on this topic is to appear.

Souques has been studying camptocormia, a functional bending in of the trunk, curable by any method of counter suggestion. Souques has used a plaster corset which, he says, must be definitely used as a suggestion and not as an orthopedic measure.

The hospital for psychoneuroses at Paris under Laignel-Lavastine founded in 1915 has had annexed to it under the name of "isolation service," another therapeutic service known as "*coercitive*." The center for psychoneuroses now contains 550 beds and has dealt with neuropsychic disorders following shell explosion, simulators, exaggerators, theatrical reactions on the part of cured soldiers sent back to the colors, psychopaths illegally decorating themselves, psychopathic phenomena following anti-typhoid vaccination, an interesting group of constitutionally abnormal persons (for whom certain places for safe-keeping are suggested: Colin at Villejuif has an approximation to such a psychiatric prison called a "quarter for difficult insane") and a variety of already well-recognized nervous troubles. Laignel-Lavastine proposes to separate completely the functional syndromes from the so-called physiopathic syndromes of Babinski and Froment. The particular physiopathic disorders in this group which Laignel-Lavastine finds are in the motor and vascular fields so that he speaks of "physiopathic vasculo-muscular syndromes."

Vincent in the 9th regional center at Tours has worked especially upon the intensive treatment of hysterics. He finds practically that he needs to re-educate separately the arm, the leg and the mind. The groups are commanded by former wounded persons who are now convalescing. The re-education takes four hours a day, two hours in the morning and two in the afternoon. All possible freedom is otherwise allowed them, since it is regarded as the duty of these men to get well as soon as possible in order to go back to the front. In six months 1,173 patients have been treated; 288 have been cured, of whom 250 were hysterics and 38 had slight organic lesions, that is, about one in four of these men returned to the front. It will be observed that the hysterics count as six to one against the organic cases. Hysterics, according to Vincent, ought to be cured in about 90 per cent of the cases. Hysterics kept for a long time in the Midi region are much more difficult to cure than those in the 9th region.

Sollier reports an extraordinary diminution of his cases of hystero-traumatic functional disorders: 259 in the five months of 1914, 271 in 1915, and but 31 in nine months of 1916. Curiously enough not only these hysterical manifestations but also the so-called reflex paralysis of Babinski and Froment disappeared in a similar manner. Sollier's therapeutics consists in manual forced mobilization, also a method called "torpillage," consisting in the application of the galvanic current to the body to learn which movements the patient is really able to perform. The current is also applied to excite sensation in the limbs. According to Sollier, the essential trouble in hysterics is anesthesia and this anesthesia is not psychic but of a physical order.

Lépine in the psychiatric center at Lyons has had much to do with shell-shock and speaks also of the importance of syphilis and alcoholism (alcoholism appears to have been very unequally suppressed in parts of France, and alcoholics appear in 30 to 35 per cent of the admissions).

A variety of persons from 40 to 46 years have become victims of progressive hemiplegia to which they succumb in an interval of a few days to a month. These cases are not alcoholic. Some of them are tuberculous. Syphilis probably causes some. The victims are not soldiers so much as workers in various painful tasks. Paranoid cases are also often sent in from the psychiatric centers of the front.

Grasset has been particularly interested in invaliding propositions assigning percentages for the compensation in various disorders.

The Algiers clinic speaks of special syndromes in the Senegalese. These subjects have ideas of persecution and react with remarkable speed to their ideas, going on fugues or attempting suicide. One walked away from the hospital for a full twenty-four hours before he was taken. One hid for thirty-six hours in a tree. Psychoses of recurrent fever and of malaria are reported.

Psychopathic Social Service

The Psychopathic Hospital of Boston offers to social workers eight months' study and practice in the Social Service Department, planned to supplement previous training and experience by affording an opportunity for special experience with psychopathic patients and knowledge of mental defect and mental disorder. The course covers the following: field work, methods of recording, selected reading, special lectures, daily staff meeting of physicians, weekly staff meeting of psychologists, daily case discussion of social workers, and clinic management. Under some circumstances the trustees arrange for specially trained workers to receive maintenance in the hospital as internes.

BOOK REVIEWS

THE JUKES IN 1915. By Arthur H. Estabrook, of the Eugenics Record Office, with a preface by Charles B. Davenport. Carnegie Institution of Washington, Publication No. 240.

The readers of MENTAL HYGIENE need no introduction to "The Jukes" of past generations as described in the classical work of Robert L. Dugdale in 1875. "The ancestral breeding-spot of this family nestles along the forest-covered margin of five lakes, so rocky as to be at some parts inaccessible." Since Dugdale's time the Jukes have left their original habitat, and "now there is not a single Juke living in the ancestral area, and only ruins of their abodes remain." The descendants of to-day are to be found in various localities in at least fourteen states of the Union. "One thousand two hundred and fifty-eight individuals descended from the five original Juke sisters are living in 1915."

It is, of course, interesting to know what has been the effect on this family of its dispersion with resulting alteration of environment, exposure to new influences, chances of introduction of other blood, and the correctional efforts exerted upon it by the various communities in the midst of which its representatives have found their homes.

"The present study of the Juke family was made possible by the chance discovery of the original manuscript Juke record of Dugdale. In the fall of 1911 Mrs. O. F. Lewis, wife of the General Secretary of the Prison Association of New York, while looking over a lot of papers stored away in the cellar of the Prison Association building, found this valuable paper in Dugdale's handwriting. It was recognized by Dr. Lewis, who kindly gave the *Eugenics Record* office permission to copy the names and other data not found in the Juke publication. With the names as a foundation the present study has resulted."

Of the 1,258 individuals mentioned above, 186 are under the age of six. Three hundred and twenty-four are between the ages of six and fifteen; the school record of 227 of these has been studied; the record of 31 was "good," 113 "fair," and 83 "poor." Of 625 grown-up individuals, including all men over the age of nineteen and all women over the age of fifteen, investigated with reference to social reaction, 65 are classed as good citizens, 255 as "fair," and 305 as "poor," *i. e.* anti-social in their behavior, being prostitutes, criminals, drunkards, etc. The new conditions have not made much improvement in the Jukes!

This study by Dr. Estabrook makes a valuable complement to the older study by Dugdale.

A. J. ROSANOFF, M.D.

BEING WELL-BORN—AN INTRODUCTION TO EUGENICS. By Michael F. Guyer, Ph.D. Indianapolis: The Bobbs-Merrill Company, 1916.

This little volume of nearly 400 pages is one of the Childhood and Youth Series edited by M. V. O'Shea, Professor of Education at the University of Wisconsin. The publishers say, "The Childhood and Youth Series is the first systematic attempt to give to parents, teachers, social workers and all others interested in the care and training of the young, the best modern knowledge about children in a manner easily understood and thoroughly interesting."

The main argument of the book is well summarized in the following paragraph in the preface by the author: "Once grasp the truth that a child's fate in life is frequently decided long before birth, and that no amount of food or hospital service or culture or tears will ever wholly make good the deficiencies of bad 'blood,' or in the language of the biologist, a faulty germ-plasm, and the conviction must surely be borne home to the intelligent members of society that one thing of superlative importance in life is the making of a wise choice of a marriage mate on the one hand, and the prevention of parenthood to the obviously unfit on the other."

Chapters I–V present in popular and very readable language general principles of genetics with frequent reference to the biological material on which they are based. Chapter VI, dealing with prenatal influences other than heredity, contributes towards a salutary balance in the course of the argument.

The next chapter is devoted to a discussion of responsibility for conduct. As within the limits of such a chapter, the material for this discussion is well chosen and admirably presented; yet neither full consistency nor real clearness has been attained in the treatment of the philosophical bearing of this material. The author's conclusion at the end of the chapter may seem clear but is not so in reality: "All can not be held equally responsible ethically, but the lowermost limit of obligatory response to social and ethical demands necessary to rank one as within the pale of normal conduct is at such a level that any one not an actual defective can in a reasonably wholesome environment surmount it. All normal men are responsible for their conduct." What does he mean by "responsible"? Does he mean liable to punishment for crime, or does he mean liable to treatment, at the hands of society, freed from all motive of retribution and calculated as far as possible to restore damage and prevent future damage? If the former, then the reviewer, for one, would say without hesitation that the author is wrong; if the latter, then he is right but does not go far enough, as by that definition obviously both "normal" and "abnormal" men are responsible. Furthermore, what is the "lowermost limit of obligatory re-

sponse," what is "any one not an actual defective," and what is a "reasonably wholesome environment"?

The remaining three chapters are devoted to what may be termed applied genetics or eugenics proper, and deal mainly with the problem of prevention of constitutional mental disorders. If ever this problem is solved, it will be perhaps by the combined contributions of biology, psychology, psychiatry, and sociology; many a writer with only a one-sided equipment has burned his fingers in the handling of it. In the book before us, were the author as competent a psychiatrist as he is a biologist, would he still say, " . . . we are still forced to believe that an alarming increase in insanity is in progress and that society is woefully derelict in permitting the marriage of such unfortunates"? However, it should be added that, if inaccuracies and other imperfections are to be found here and there—such as are almost inevitable in a first edition of such a book as this—its general merit is high, and we wish it a favorable reception. The need for dissemination of such knowledge as we have on eugenics is great. This book is well adapted for that purpose and by slight alteration, upon a call for a second edition, could be made perhaps unexceptionable.

A. J. Rosanoff, M.D.

Social Diagnosis. By Mary E. Richmond, Director, Charity Organization Department, Russell Sage Foundation. New York: Russell Sage Foundation, 1917.

To the mental hygienist social diagnosis is hardly less important than mental diagnosis, for social disorder and mental abnormality appear as two aspects of the same case. To know whether social factors are contributing to the maladjustment of a psychopathic individual is a part of psychiatric study, which is recognized in the development of social service as a part of mental hygiene. The social worker in the mental hygiene field has the same need of careful and exact methods as the social case worker in other fields. At the Psychopathic Hospital in Boston, the social workers had formed a class to study Miss Richmond's "Social Diagnosis" within two weeks of its publication. The great value of the book is that it is the first to put substantially before us this fundamental concept of social work—that there is a definable technique in case work. To most people social work is a perceptible presence without parts and of uniform substance throughout. To hold that view unbroken after reading Miss Richmond's careful analysis would be difficult. The long and rich experience of the author, moreover, puts a high value upon her conclusions.

The first chapter briefly traces the evolution of social case work from the well-meant but aimless attempts at "doing good" to present-day standards which "are being advanced to a point where they can be called

professional." The term "diagnosis" is used to include the collecting of evidence in regard to an individual's social condition, the conclusion drawn from this information, and the plan of treatment to be followed. The three sections of the book deal with (1) evidence, (2) sources from which evidence is obtained, (3) variations in evidence pertinent to different types of case, such as the neglected child, the immigrant, the homeless man. The chapters on social evidence are especially valuable as an adaptation of legal experience to social work. The second section deals in great detail with all possible sources of information and contains an abundance of concrete illustrations from case records. The third section consists of questionnaires relating to different types of social disability.

The reader is likely to be confused by the unusual use of "diagnosis" and to find that he must reclassify the material of the book before he can use it. The customary terms, examination, diagnosis, prognosis, and treatment, while they express overlapping processes, afford a framework for thought which the ordinary person finds an acceptable support. Further confusion may be caused by the particularity with which relatively unimportant matters are expanded, so that the reader has difficulty in maintaining a perspective.

The absence of any consideration of the psychiatric point of view in individual study is very noticeable; for although the author speaks of the necessity for "an understanding of characterology, for which no satisfactory body of data yet exists," there is a conspicuous lack of reference to such psychopathic conditions as Healy discusses in twenty chapters out of twenty-seven in the section of Causative Factors in his "Individual Delinquent," and there is no direct discussion of instincts, emotions, and habits as factors in producing conduct. Failure to recognize the objective methods in the study of individuals is a serious omission. The author seems to advocate the traditional method of "put yourself in his place," although psychiatry is teaching social work that observation is a finer tool than sympathetic introspection.

As the first book on social case work, this volume will be received with great gratitude by social workers everywhere. It is a big task to bring order into a field so vast, complex, and uncharted as this business of reorganizing disordered lives. Although an enormous amount of such work has been done with a large measure of success, it has been done by persons not trained to conscious skill or analysis of processes but guided largely by intuitions, because no body of knowledge and no adequate training has existed. As a first step toward scientific method this book is invaluable.

It is to be hoped that it will have many readers among persons, other than social workers, whose work or general interests give them concern for individual human lives. The book is exceedingly well composed

typographically, and, with chapter summaries, a good index, and a full bibliography, is a very convenient and likable volume.

MARY C. JARRETT.

ANTHROPOMETRY AS AN AID TO MENTAL DIAGNOSIS. By E. A. Doll, Assistant Psychologist, The Training School, Vineland, N. J. Publication No. 8 of The Training School, Department of Research.

Citing researchers in the past, Mr. Doll gives various statistics which show that the feebleminded were both shorter and lighter than the normal. Goddard collected data on approximately 11,000 feebleminded individuals ranging in age from birth to sixty years, and his tables and curves demonstrated that with but slight exceptions the feebleminded of both sexes were below the normal averages, and that the degree of subnormality bore a direct relation to the degree of mental defect, with the highest grades, the morons, closely approximating the normal.

The material for study used by Mr. Doll was obtained from the anthropometric data assembled since the establishment of the Research Laboratory at The Training School.

A careful description is given of the manner in which to compute the mental age of a given individual. The first table gives data of the original measurements for individual girls, classified by mental ages and arranged in order of chronological age. The second table shows the same for boys. For example, the first subject in Table 1 is a girl of mental age 1, whose chronological age is 8, and who measures 1114 mm. in standing height, 595 mm. in sitting height, and 17.5 kg. in weight; she failed entirely in the grip and vital capacity tests, with a consequent measurement of 0 for each. Other tables show the percentile averages for idiots (mental ages 1–2), imbeciles (mental ages 3–7), and morons (mental ages 8–11).

A summary of the results may be briefly stated as follows: The feebleminded of all grades are below normal in standing height. The higher mental types, the morons, approximate the normal, which conclusion is in accord with the findings of Goddard, Mead, and others. They also agree with the conclusions of Gratsianoff, Sack, Porter, MacDonald, Smedley, and DeBusk, with normal subjects, that bright children tend to be taller than dull. The feebleminded not only grow at a retarded rate but also cease growing at an earlier age. Sex differences are noticeable, but are not very significant. The mental age curve for boys is superior at six ages, and inferior at four ages, to that for girls. The total average height is 14 per cent nearer the normal for boys. Boys grow to a slightly later age than girls and at a slightly less retarded rate. The feebleminded of all grades are below normal in sitting height; the degree of subnormality is closely correlated with degree of feebledmindedness. Seventy-five per cent of all feebleminded fail to reach the normal

average in sitting height. Taken alone, weight has but little value for diagnosis of feeblemindedness in the highest mental ages, but has some value in the lower ages. Approximately 40 per cent of all feebleminded reach the normal average, but the per cent applies chiefly to the higher types of defect. In the typical case it is highest of all the six measurements and is close to normal.

Mr. Doll's results would tend strongly to confirm the statement that strength of mind and strength of hand accompany each other. Strength of grip is so markedly subnormal that frequently the measurements fall outside the norms of comparison. Girls are markedly closer to normal than boys in strength of grip, and show a somewhat higher correlation with mental age.

As in strength of grip, so also in vital capacity all feebleminded are markedly below normal. Considering that it shows the greatest subnormality of all measurements, that it shows the least dependence upon height and weight, and a high correlation with mental age, and that only eight per cent of all feebleminded reach the normal average, Mr. Doll believes it could safely be taken alone as a highly reliable single index of mental incapacity.

The specific characteristics of epileptic and insane types in the measurements are not yet entirely clear. In general such clinical types show the general characteristics of the feebleminded reactions, but not their specific nature.

As Mr. Doll states, since this study deals primarily with only feebleminded subjects, it may be questioned how reliable the findings are among other groups of subjects as controls. He does not attempt to explain the results, nor are definite conclusions drawn, except for diagnostic purposes, and he is content to present the results as facts, hoping that the setting forth of them may encourage others to delve more deeply. To explain the results would necessitate a far more thorough understanding of the physiology and biochemistry of each case than was available, entailing untold research in itself vastly exceeding the present investigation.

One is rather fascinated with the thoroughness with which Mr. Doll has dealt with his subject. We find all such statistics novel and interesting. Yet one cannot help feeling that there is a futility about it all. Why should we depend upon exterior measurements and physical capacity to gauge the mentality of a human being? The clinical methods now used by the neurologist and psychiatrist permit of a precise mental analysis of the *psyche* itself. These as well as the psychometric tests already in use would seem to be the more direct and satisfactory mode of approach to the problem of gauging the mental age of the feebleminded and mentally defective, while the anthropometric data might be considered of secondary importance, to serve as a further corroboration

of that which has already been found by careful examination of the individual case. However, Mr. Doll's work is an excellent study of its kind.

L. Pierce Clark.

Occupation Therapy—A Manual for Nurses. By William R. Dunton, Jr., M.D. Philadelphia: W. B. Saunders, 1915.

Occupation therapy covers a broad field of endeavor, of which, perhaps, the work with the mentally ill opens the greatest possibilities. It has exacted the services of those with large sympathies and tact, and who have been trained to impart the knowledge acquired by years of study and experience. It also demands that nurses shall have the training and ability to divert and occupy their patients either in the home or hospital.

The book by Doctor Dunton is not intended as a text-book for students of occupation therapy, but is, as the title and preface imply, "A Manual for Nurses."

It is explained that the book is the outgrowth of a series of talks that were given to the nurses at the Sheppard and Enoch Pratt Hospital, and throughout, the book is written either for the hospital or private nurse, particularly of mental disease.

That the author is a firm believer in occupation for nervous cases is made clear. The first chapter is historical. The value of a "hobby" and the "psychology" and "mechanism of recovery by occupation" are set forth. That the nurse can use to advantage the social instinct of the patients is recognized, and chapters are devoted to suggestions of the different modes of occupation that may be used to meet the varying interests of one or many patients. There are chapters on "Puzzles," "Reading," "Physical Exercise," "String Work," "Basketry," and "Needlework."

Practically all the occupations suggested are in simple form, the materials for which the nurse herself could own and have with her as part of her professional equipment. The bibliography of the subjects mentioned is distinctly valuable.

A printed form of the seven "cardinal rules in applying occupation therapy" with which the book concludes, can very well be placed in the hands of every nurse engaged in a hospital for mental treatment, and all nurses should have the book.

Emily L. Haines.

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